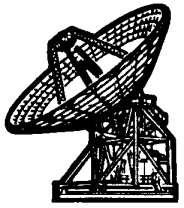
Deep Space Network Forecast Review

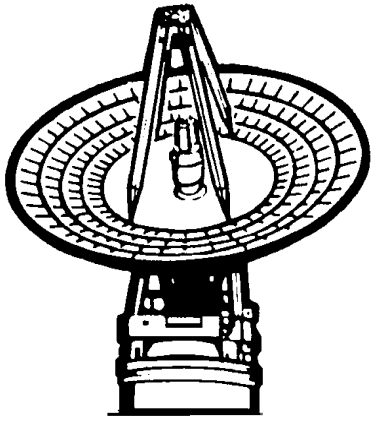
Version 2.0 Final

2010 - 2012

RAPS Team

February 17, 2009





Agenda

- Loading Study
- Periods of Contention
- Events, Recommendations, and Analyses

Loading Study

- Assumptions
- Project Changes and Changes in DSN Resource Support Request
- New Projects
- Deleted Projects
- DSN User / Mission Planning Set
  - Ongoing / Approved Projects
  - Advanced / Planning Projects
- Major DSN Downtimes by Date
- IND Resource Implementation Planning Matrix

Assumptions

- The previous designation of 26M meaning DSS-16,46,66 will now equate to DSS-46 only. As of August 01, 2009 DSS-46 is scheduled to be taken down for an indeterminate length of time.
- MSL launch plans are still in flux and are being worked. We have assumed launch in December 2011 and arrival in August 2012. Launch, Cruise, Approach and MOI support has been nominally adjusted to reflect this new launch period in the forecast database.
- The following Project/User requirements were not considered during the analysis process and will be negotiated during the Mid-Range Scheduling Process:
  - ATOT – Development (4 - 8 hour supports); Mission (8 hour supports)
  - DSN - (Antenna and ZDD Calibrations)
  - GBRA - Guest Observations (4 – 8 hour supports); PRA-GAVT (all supports); Host Country 4 – 8 hour supports
  - GSSR - (GODR supports at DSS-14/15)
  - MER 1 & 2 - Uplink and Downlink MSPA passes
  - RFC - Clock Sync and CAT M&E S/X and X/Ka-band VLBI
  - Space Geodesy Programme

Resource Allocation Review
Loading Study
Project Changes Since August 2008

- **Cassini**
  - 2010: Changed Tour support for Solstice extended mission, deleted 70M/34M array support and changed supports to two 9-hour 70 Meter and five 9-hour 34 Meter supports per week in weeks 26 – 52.
  - 2011: Added Tour support for Solstice extended mission, two 9-hour 70 Meter and five 9-hour 34 Meter supports per week in weeks 01 – 52.
  - 2012: Added Tour support for Solstice extended mission, two 9-hour 70 Meter and five 9-hour 34 Meter supports per week in weeks 01 – 52.
- **Chandra X-Ray Observatory**
  - 2009: Moved Recompile Uplink and Backup passes from weeks 03 and 08 to weeks 27 and 39.
- **Chandrayaan - 1**
  - Changed Launch date from 10/15/2008 to 10/22/2008.
  - Changed End of Prime Mission from 09/19/2009 to 10/21/2010.
  - Changed End of Extended Mission from 09/19/2010 to 10/21/2011.
- **Cluster II**
  - 2009: Added 1 support for MSO in weeks 14, 18, 22, 30, 34 and 38.

Resource Allocation Review
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Project Changes Since August 2008

- **Dawn**
  - **2009: Increased Vesta Thrust PB requirements of 1 pass per week from 6 to 8 hours in weeks 23 – 53. Added Vesta Thrust TV support requirements of one 4-hour pass per week in weeks 23 – 53.**
  - **2010: Increased Vesta Thrust PB requirements of 1 pass per week from 6 to 8 hours in weeks 01 – 52. Added Vesta Thrust TV support requirements of one 4-hour pass per week in weeks 01 – 52.**
  - **2011: Increased Vesta Thrust PB requirements of 1 pass per week from 6 to 8 hours in weeks 01 – 18 and added 1 pass per week in weeks 19 – 30. Added Vesta Thrust TV support requirements of one 4-hour pass per week in weeks 01 – 30. Added Flight S/W Load support, ten 8-hour passes in week 04. Added Side B Load support, four 8-hour passes in week 06.**
  - **2012: Changed Vesta orbit requirements, added seven 4-hour passes per week in weeks 03 – 14. Changed Vesta departure requirements, moved seven 4-hour passes per week in weeks 03 – 10 to weeks 15 – 23. Increased Ceres Thrust PB requirements of 1 pass per week from 6 to 8 hours in weeks 24 – 52 and deleted support in weeks 11 – 23. Added Ceres Thrust TV support requirements of one 4-hour pass per week in weeks 24 – 52.**

Project Changes Since August 2008

- **Dawn (Continued)**
  - **2013: Increased Ceres Thrust PB requirements of 1 pass per week from 6 to 8 hours in weeks 01 – 52. Added Ceres Thrust TV support requirements of one 4-hour pass per week in weeks 01 – 52.**
  - **2014: Increased Ceres Thrust PB requirements of 1 pass per week from 6 to 8 hours in weeks 01 – 47. Added Ceres Thrust TV support requirements of one 4-hour pass per week in weeks 01 – 52.**

Resource Allocation Review
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Project Changes Since August 2008

- **GOES-O**
  - Changed launch date from 01/16/2009 to 04/28/2009.

- **GRAIL – A (Gravity Recovery and Interior Laboratory A)**
  - Changed End of Primary Mission from 05/27/2012 to 06/06/2012.
  - 2011: Increased passes from 11 to 15 in week 51 for TCM-A5 event. Increased passes from 15 to 21 in week 52 for TCM/LOI.
  - 2012: Increased passes from 7 to 21 in weeks 01, 08, and 09 for Orbiter Checkout and change in Science Phase start. Increased support from 4 – 10 passes to 14 passes per week in weeks 02 – 07, 10 – 15, and 18 – 19 due to changes in maneuver strategy and to meet science needs. Extended coverage and added 11 passes in week 22, and 2 passes in week 23 for Decommissioning.

- **GRAIL – B (Gravity Recovery and Interior Laboratory B)**
  - Changed End of Primary Mission from 05/27/2012 to 06/06/2012.
  - 2011: Increased passes from 10 to 14 in week 51 for TCM-B5 event. Increased passes from 14 to 21 in week 52 for TCM/LOI.
  - 2012: Increased passes from 7 to 21 in weeks 01, 08, and 09 for Orbiter Checkout and change in Science Phase start. Increased support from 4 - 10 passes per week to 14 passes per week in weeks 02 – 07, 13 – 14, and 16 – 21 due to changes in maneuver strategy and to meet science needs. Extended coverage and added 14 passes in week 22, and 2 passes in week 23 for Decommissioning.

Resource Allocation Review
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Project Changes Since August 2008

- **Juno**
  - 2011: Launch support moved to week 31 DOY 219, added 3 additional supports for HV Checkout in week 44, added 7 additional supports for HV Checkout in weeks 45 & 46, deleted 1 support for Cruise in weeks 45 & 46.
  - 2012: Added supports for DSMs in week 39.
- **Kaguya (SELENE)**
  - Emergency commitment has ended.
- **Kepler**
  - Changed launch date from 04/10/2009 to 03/06/2009 and Initial Acquisition has been shifted for support.
- **LCROSS**
  - Changed launch date from 02/27/2009 to 04/24/2009.
- **Lunar Reconnaissance Orbiter**
  - Changed launch date from 02/27/2009 to 04/24/2009.

Resource Allocation Review
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Project Changes Since August 2008

- **Mars Express Orbiter**
  - Changed End of Extended Mission from 05/01/2009 to 12/31/2010.
  - 2010: Changed 23 weeks of Orbital Sci to Occultations in weeks 07 – 30. Changed 13 weeks of Orbital Sci to Occultations / R/S Solar Cor in weeks 39 – 52.
  - 2011: Changed 24 weeks of Orbital Sci to Occultations in weeks 23 – 37.
  - 2012: Extended Orbital Sci and R/S Bi-Static to the end of 2012.

- **Mars Odyssey**
  - 2012: Extended MAP/MSL Relay to week 09, Extended Mapping to end of week 52.

- **Mars Reconnaissance Orbiter**
  - Provided re-plan of extended science mission. The additional daily 70m pass requested for MSL relay has been shifted to 2012 – 2014 and extended science of daily 34m and 70m passes has been added through 2015. Delta DOR supports have also been added.

- **Mars Science Laboratory**
  - Changed launch date October of 2009 to 12/02/2011.

Resource Allocation Review
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Project Changes Since August 2008

- **New Horizons**
  - **2009: Added 34 meter Array Testing in weeks 29 and 32, three 8-hour passes each week. Changed Beacon support from 34BWG1 to 70M and 34BWG1. Changed Checkout support added 1 – 5 passes in weeks 35, 36 and 38, and added 2 passes in week 39 and 5 in week 46. Changed Encounter Rehearsal support added 1 pass in week 33.**
  - **2010: Added 34 meter Array Testing in weeks 23 and 26, three 8-hour passes each week. Changed Beacon support from 34BWG1 to 70M and 34BWG1. Changed Checkout support added 1 – 2 passes in weeks 22, 23, 27 and 28.**
  - **2011: Added 34 meter Array Testing in weeks 20 and 23, three 8-hour passes each week. Changed Beacon support from 34BWG1 to 70M and 34BWG1. Changed Checkout support added 1 pass per week in weeks 13, 19 – 25, and added 4 passes in weeks 45 and 46. Changed Maneuver support deleted 4 passes from each week 50 and 51 and added 3 passes in week 25.**
  - **2012: Added 34 meter Array Testing in weeks 20 and 24, three 8-hour passes each week. Changed Beacon support deleted one .7-hour pass per week in weeks 19 – 26 and added in weeks 38 – 44. Added Checkout support added four 8-hour passes per week in weeks 01, 02, 18 – 26, 45 and 46. Changed Delta-DOR support, deleted 2 supports in week 38 and added 4 passes in weeks 18, 19 and 24 and added 2 in weeks 23 and 25.**

- **New Horizons (Continued)**
  - 2012 (continued): Added L MET CCD CMD support one 8-hour pass in weeks 20 and 24. Changed Maneuver support deleted 3 passes from week 41 and added 3 passes in week 22. Deleted Flyby Rehearsal support seven 8-hour passes per week in weeks 38 – 44.
  - 2013: Added 34 meter Array Testing in weeks 20 and 24, three 8-hour passes each week. Changed Beacon support deleted one .7-hour pass per week in weeks 19 – 27 and added one pass per week to weeks 38 – 44. Changed Checkout support added four 8-hour passes per week in weeks 19 – 26, and deleted 2 - 3 passes in weeks 38 – 44. Changed Delta-DOR support, deleted 2 supports in week 38 and added 4 passes in weeks 19, 20 and 24 and added 2 in weeks 23 and 25. Changed Maneuver support deleted 7 passes from week 7 and 3 from week 41 and added 3 passes in week 22. Added one 8-hour Solar Conjunction pass in week 52.
  - 2014: Added 34 meter Array Testing in weeks 20 and 24, three 8-hour passes each week. Changed Beacon support deleted one .7-hour pass per week in weeks 28 – 42. Changed Checkout support added four 8-hour passes per week in weeks 28 – 31, and 3 – 7 passes in weeks 34 – 42. Delete one 8-hour 70M Cruise/Telemetry Support in weeks 32, 36 and 40. Changed Delta-DOR support, added 4 passes in weeks 28, 29, 34 and 35. Changed Maneuver support deleted 7 passes from week 13.

Resource Allocation Review
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Project Changes Since August 2008

- **SOHO**
  - 2010: Added HSO support in weeks 19 – 27.
  - 2011: Added Keyhole support in weeks 01 – 05, 14 – 17, 26 – 31, 40 – 43, and 52 – week 04 of 2012. Added Keyhole Maneuver on DOY 025 – 027, 112, 200 – 203, and 294.
  - 2012: Added Keyhole support in weeks 13 – 15, 25 – 29, and 39 – 42. Added Keyhole Maneuver on DOY 016, 018, 104, 192, 195 and 285.
- **Spitzer Space Telescope**
  - 2009: Increased 34M portion of array support from 2 hours to 4 hours in weeks 14 – 22.
- **STEREO Ahead**
  - 2010: Increased track duration to 8 hours for Extended Science in weeks 16 – 53, Increased HGA calibration track duration to 3 hours weeks 01, 28 and 40.
  - 2011: Increased track duration to 8 hours for Extended Science 1-52, Increased HGA calibration track duration to 3 hours weeks 02, 14, 28 and 40.
  - 2012: Increased track duration to 8 hours for Extended Science in weeks 01 - 52, Increased HGA calibration track duration to 3 hours in weeks 02, 14, 28 and 40.
- **STEREO Behind**
  - 2010: Increased track duration to 8 hours for Extended Science in weeks 01 – 53, Increased HGA calibration track duration to 3 hours in weeks 01, 28 and 40.

- **STEREO-Behind (CONTINUED)**
  - 2011: Increased track duration to 8 hours for Extended Science in weeks 01 – 52,
  - Increased HGA calibration track duration to 3 hours in weeks 02, 14, 28 and 40.
  - 2012: Increased track duration to 8 hours for Extended Science in weeks 01 – 52,
  - Increased HGA calibration track duration to 3 hours in weeks 02, 14, 28 and 40.
- **THEMIS B (Artemis)**
  - 2009: Added test support.
  - 2010 – 2012: Added operational support.
- **THEMIS C (Artemis)**
  - 2009: Added test support.
  - 2010 – 2012: Added operational support.
- **Ulysses**
  - Changed End of Extended Mission from 10/06/2008 to 03/31/2009.
- **Wilkinson Microwave Anisotropy Probe**
  - 2009: Change Maneuver support, moved 2 passes from week 05 – 07.
  - 2010: Change Maneuver support, deleted 2 passes from week 05, and moved 2 passes from week 31 to 32.

Resource Allocation Review
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New Projects Since August 2008

Project	Acronym	Launch or Start	EOPM	EOEM
None				

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Removed/Unsupported Projects Since August 2008

Project	Acronym	Launch or Start	EOPM	EOEM
Kaguya (SELENE)	SELE	09/14/07	11/21/08	TBD
Phoenix Scout	PHX	08/04/07	08/31/08	10/30/08

Resource Allocation Review
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DSN User / Mission Planning Set

– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
DSN Antenna Calibration	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
DSN ZDD Calibration	DSN	--	--	--
Reference Frame Calibration (Cat M&E and Clock Sync)	DSN	10/01/01	09/30/20	12/31/30
Voyager 2	VGR2	08/20/77	10/15/89	12/31/13
Voyager 1	VGR1	09/05/77	12/31/80	12/31/13
Goldstone Solar System Radar	GSSR	10/01/88	09/30/20	12/31/30
European and Global VLBI Systems	EGS	10/01/88	09/30/20	12/31/30
Ulysses	ULYS	10/06/90	09/11/95	03/31/09
Geotail	GTL	07/24/92	07/24/95	09/30/10
Space Geodesy Programme	SGP	05/01/93	09/30/20	12/31/30
Wind	WIND	11/01/94	11/01/97	11/30/13
Ground Based Radio Astronomy	GBRA	10/01/95	09/30/20	12/31/30
SOHO	SOHO	12/02/95	05/02/98	12/31/13
Advanced Composition Explorer	ACE	08/25/97	02/01/01	10/01/13
Advanced Tracking and Observational Techniques (ATOT)	ATOT	10/01/97	09/30/20	12/31/30

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DSN User / Mission Planning Set

– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Cassini	CAS	10/15/97	06/30/08	06/30/10
Chandra X-Ray Observatory	CHDR	07/23/99	09/30/14	09/30/19
Cluster 2 - S/C #2 (Samba)	CLU2	07/16/00	02/15/03	09/30/11
Cluster 2 - S/C #3 (Rumba)	CLU3	07/16/00	02/15/03	09/30/11
Cluster 2 - S/C #1 (Salsa)	CLU1	08/09/00	02/15/03	09/30/11
Cluster 2 - S/C #4 (Tango)	CLU4	08/09/00	02/15/03	09/30/11
Mars Odyssey 2001	M01O	04/07/01	08/24/04	12/31/10
Wilkinson Microwave Anisotropy Probe	WMAP	06/30/01	10/01/03	09/30/10
Reference Frame Calibration (Cat M&E and Clock Sync)	DSN	10/01/01	09/30/20	12/31/30
International Gamma Ray Astrophysics Lab	INTG	10/17/02	12/18/04	12/31/12
Hayabusa (MUSES - C)	MUSC	05/09/03	06/10/10	- - -
Mars Express Orbiter	MEX	06/02/03	02/11/06	12/31/10
Spirit (Mars Exploration Rover - A)	MER2	06/10/03	04/06/04	10/01/11
Opportunity (Mars Exploration Rover - B)	MER1	07/07/03	04/27/04	10/01/11
Spitzer Space Telescope (SIRTF)	STF	08/25/03	05/31/09	05/31/14
Rosetta	ROSE	02/26/04	12/31/15	- - -

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DSN User / Mission Planning Set

– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
MESSENGER	MSGR	08/03/04	03/19/12	- - -
Mars Reconnaissance Orbiter	MRO	08/12/05	12/31/10	12/31/15
Venus Express	VEX	11/09/05	09/24/07	05/01/09
New Horizons	NHPC	01/19/06	04/17/16	TBD
Stereo Ahead	STA	10/26/06	01/22/09	09/30/12
Stereo Behind	STB	10/26/06	01/22/09	09/30/12
THEMIS B	THB	02/17/07	10/31/12	- - -
THEMIS C	THC	02/17/07	10/31/12	- - -
EPOXI (Deep Impact)	DIF	07/03/07	11/14/10	- - -
NExT (Stardust)	SDU	07/03/07	02/27/11	- - -
Dawn	DAWN	09/27/07	07/04/15	TBD
Chandrayaan - 1	CH1	10/22/08	10/21/10	10/21/11
Kepler	KEPL	03/06/09	11/10/12	TBD
GOES-O	GO14	04/06/09	04/21/13	TBD
Lunar Crater Observation and Sensing Satellite (LCROSS)	LCRO	04/24/09	TBD	- - -
Lunar Reconnaissance Orbiter	LRO	04/24/09	04/24/10	TBD

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DSN User / Mission Planning Set

– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Juno	JUNO	08/08/11	10/20/18	TBD
Gravity Recovery and Interior Laboratory-A (GRAIL-A)	TBD	09/09/11	06/06/12	TBD
Gravity Recovery and Interior Laboratory-B (GRAIL-B)	TBD	09/09/11	06/06/12	TBD
Mars Science Laboratory	MSL	12/02/11	04/04/14	TBD
James Webb Space Telescope	JWST	06/15/13	02/28/19	TBD

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DSN User / Mission Planning Set

– Advanced Planning Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Discovery-12	DM12	01/01/14	TBD	TBD
Mars Atmosphere and Volatile EvolutioN (MAVEN)	M13S	10/31/13	12/30/16	TBD
Magnetospheric MultiScale	MMS	10/20/14	03/20/17	TBD
Beyond Einstein-1 (Joint Dark Energy)	JDEM	07/01/15	TBD	TBD
New Frontiers-3	TBD	01/01/16	TBD	TBD
Discovery-13	TBD	01/01/17	TBD	TBD
Outer Planet-1	TBD	06/01/17	TBD	TBD
Discovery-14	TBD	01/01/20	TBD	TBD
Solar Sentinels/Inner Heliospheric	TBD	01/01/18	TBD	TBD

Resource Allocation Review
Loading Study
DSN Major Downtimes by Date

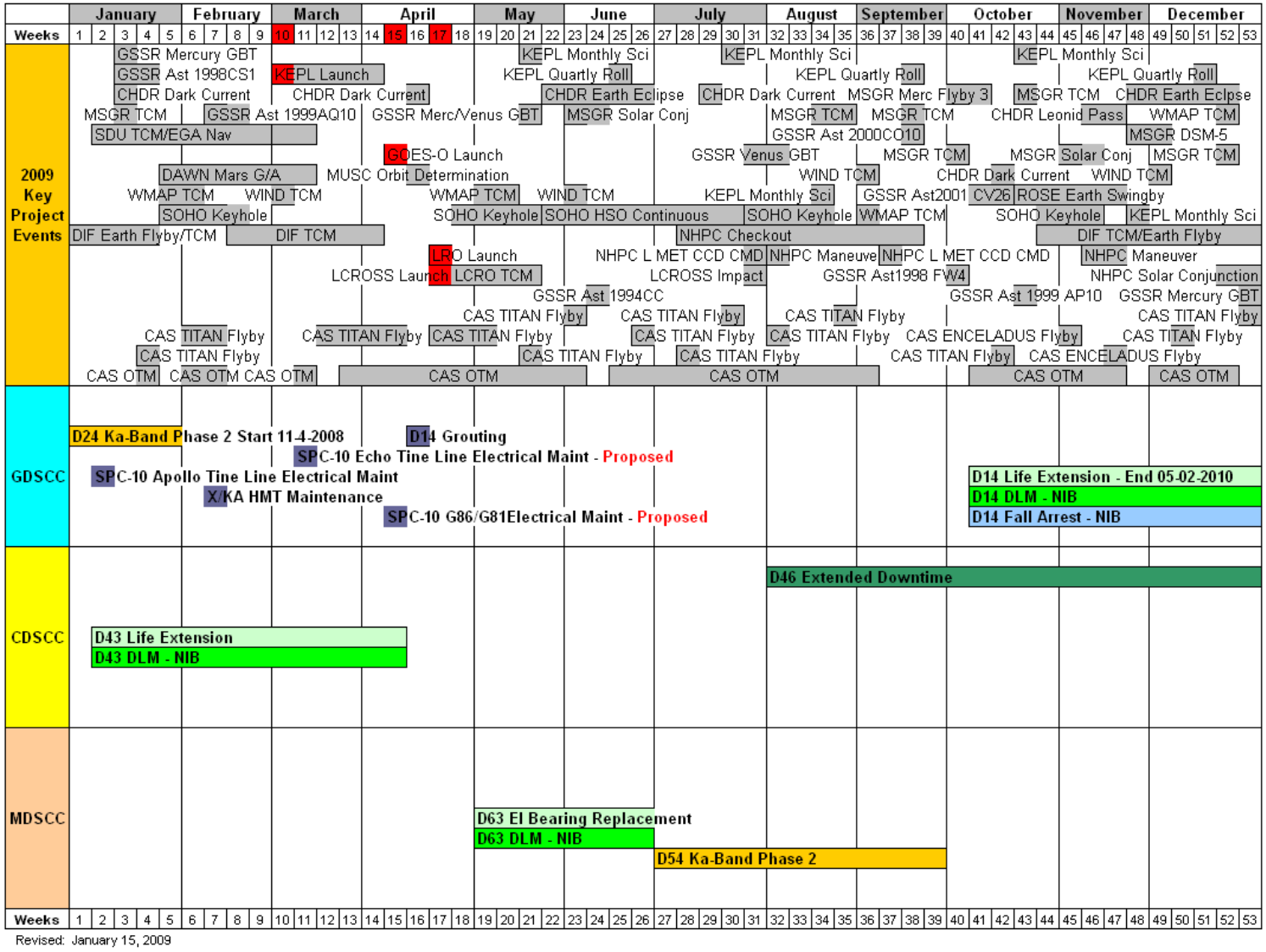
– 2009 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 43	Life Extension	01/05/2009	04/12/2009	98	02 - 15	005	102
DSS 43	Depot Level Maintenance – NIB	01/05/2009	04/12/2009	98	02 - 15	005	102
SPC 10	Echo Tie-Line Electrical Maintenance - Proposed	03/12/2009	03/13/2009	1	11 - 11	071	071
SPC 10	G86/G81 Electrical Maintenance - Proposed	04/06/2009	04/07/2009	1	15 - 15	096	096
DSS 14	Grouting	04/17/2009	04/19/2009	3	16 - 16	107	109
DSS 63	Depot Level Maintenance - NIB	05/04/2009	06/28/2009	56	19 - 26	124	179
DSS 63	El Bearing Replacement	05/04/2009	06/28/2009	56	19 - 26	124	179
DSS 54	Ka-Band Phase 2 Install	06/29/2009	09/27/2009	91	27 - 39	180	270
DSS 46	Extended Downtime	08/03/2009	12/31/2019	3803	32 - 53	215	365
DSS 14	Life Extension	10/03/2009	05/02/2010	212	40 - 17	276	122
DSS 14	Depot Level Maintenance - NIB	10/03/2009	05/02/2010	212	40 - 17	276	122
DSS 14	Fall Arrest - NIB	10/03/2009	05/02/2010	212	40 - 17	276	122
DSS 43	Life Extension	01/05/2009	04/12/2009	98	02 - 15	005	102

Resource Allocation Review Loading Study

DSN Major Downtimes by Date

– 2009 –



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Resource Allocation Review
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DSN Major Downtimes by Date

– 2010 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 34	AZ Track Replacement	02/01/2010	04/11/2010	70	05 - 14	032	101
DSS 34	M1-5 Mirror Alignment NIB	02/01/2010	04/11/2010	70	05 - 14	032	101
DSS 34	M5 Support Ring Replacement NIB	02/01/2010	04/11/2010	70	05 - 14	032	101
DSS 14	Life Extension - Proposed Extension	05/03/2010	05/16/2010	14	18 - 19	123	136
DSS 14	Depot Level Maintenance - Proposed Extension	05/03/2010	05/16/2010	14	18 - 19	123	136
DSS 14	Fall Arrest - NIB Proposed Extension	05/03/2010	05/16/2010	14	18 - 19	123	136
DSS 15	Pintle Bearing	05/31/2010	06/27/2010	28	22 - 25	151	178
DSS 15	Elevation Bear Box Replacement	05/31/2010	06/13/2010	14	22 - 23	151	164
DSS 15	Pintle Bearing - Proposed Extension	06/28/2010	07/25/2010	28	26 - 29	179	206
DSS 25	Depot Level Maintenance - NIB	08/02/2010	08/29/2010	28	31 - 34	214	241
DSS 65	Life Extension Elevation	08/02/2010	10/04/2010	63	31 - 39	214	276
DSS 25	Ka-Band Uplink Install	08/02/2010	08/29/2010	28	31 - 34	214	241
DSS 24	Paint Repair	08/30/2010	10/24/2010	56	35 - 42	242	297
DSS 24	Depot Level Maintenance - NIB	08/30/2010	09/26/2010	28	35 - 38	242	269

Resource Allocation Review
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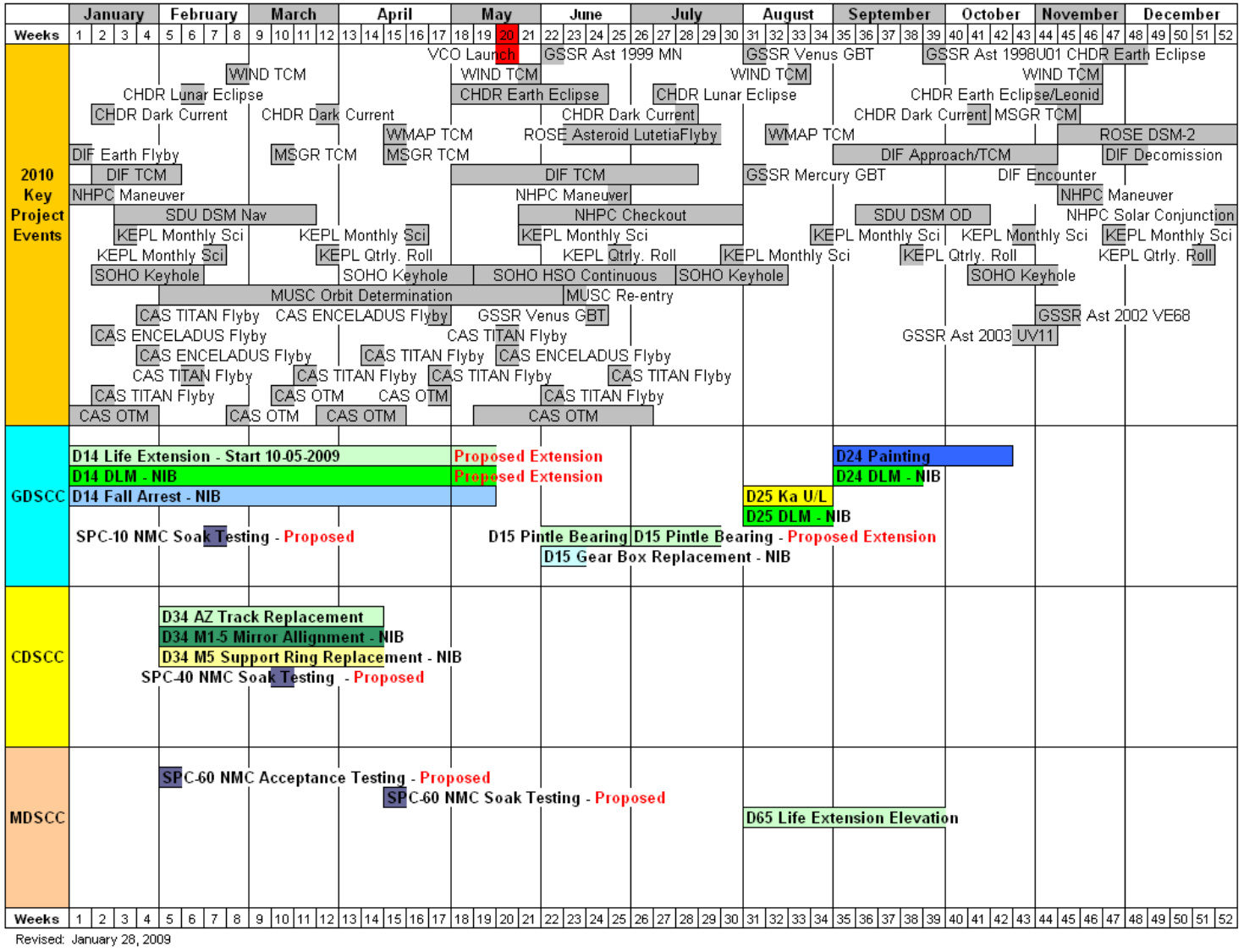
DSN Major Downtimes by Date

– 2010 –



Revised: January 28, 2009

Resource Allocation Review
Loading Study
DSN Major Downtimes by Date

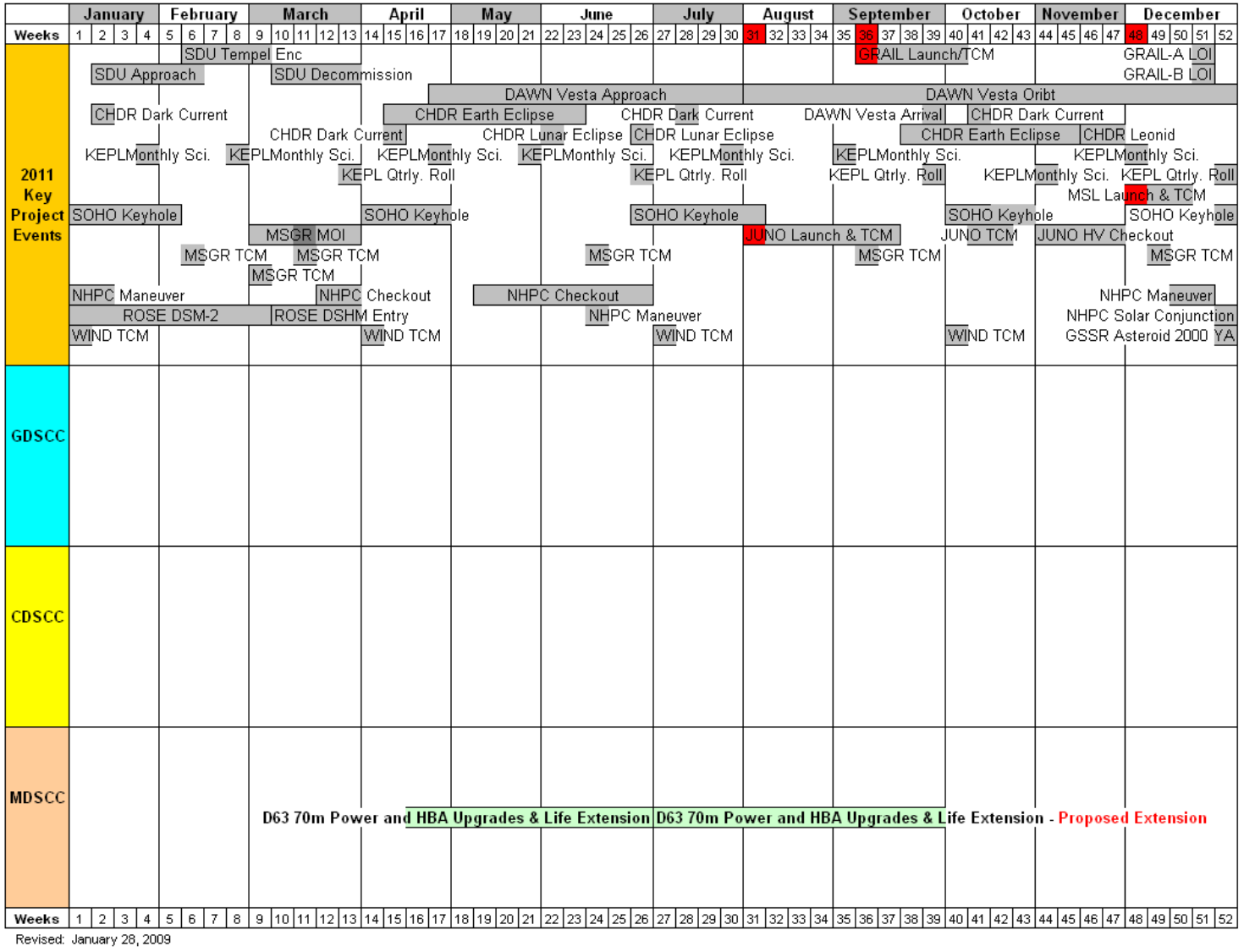
– 2011 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 63	70m Power/HBA Upgrades and Life Extension	04/18/2011	07/03/2011	77	16 - 26	108	184
DSS 63	70m Power/HBA Upgrades and Life Extension - Proposed Extension	07/04/2011	10/02/2011	91	27 - 39	185	275

Resource Allocation Review Loading Study

DSN Major Downtimes by Date

– 2011 –



Revised: January 28, 2009

Resource Allocation Review
Loading Study
DSN Major Downtimes by Date

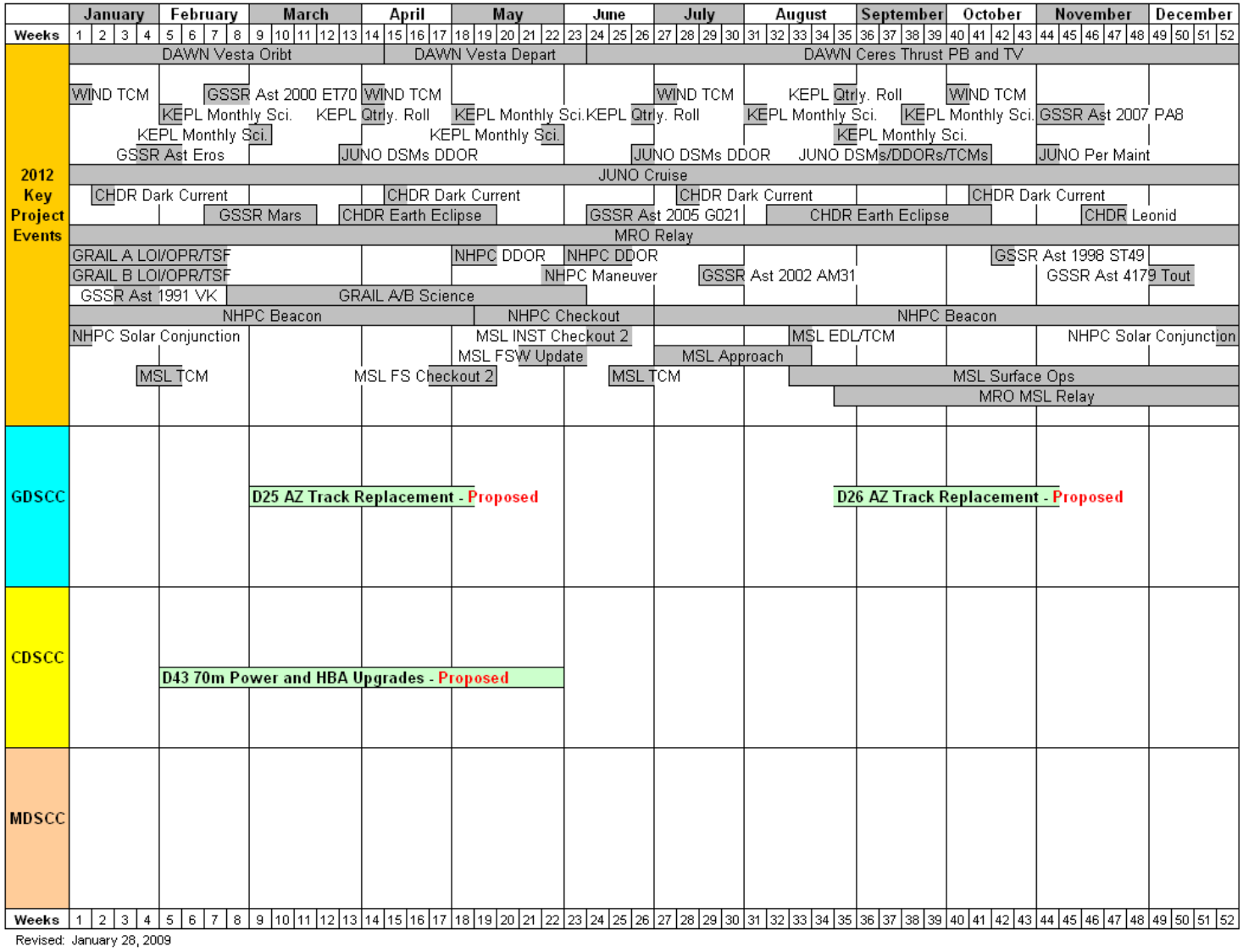
– 2012 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 43	70m Power and HBA Upgrades - Proposed	01/30/2012	06/03/2012	126	05 - 22	030	155
DSS 25	AZ Track Replacement - Proposed	02/27/2012	05/06/2012	70	09 - 18	058	127
DSS 26	AZ Track Replacement - Proposed	08/27/2012	11/04/2012	70	35 - 44	240	309

Resource Allocation Review Loading Study

DSN Major Downtimes by Date

– 2012 –



Revised: January 28, 2009

Resource Allocation Review
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IND Resource Implementation Planning Matrix

DSN Resource Implementation Planning Matrix by Complex

Complex	Station	Subnet	S-Band		X-Band		Ka-Band		Ka
			Down	Up	Down	Up	Down	Up	Phase 2
10	DSS-14	70M	✔	✔	✔	✔	N/A	N/A	N/A
10	DSS-15	34HEF	✔	N/A	✔	✔	N/A	N/A	N/A
10	DSS-24	34B1	✔	✔	✔	✔	N/A	N/A	TBD
10	DSS-25	34B2	N/A	N/A	✔	✔	✔	08/29/10	N/A
10	DSS-26	34B2	N/A	N/A	✔	✔	✔	N/A	N/A
10	DSS-27	34HSB	✔	✔	N/A	N/A	N/A	N/A	N/A
40	DSS-34	34B1	✔	✔	✔	✔	✔	N/A	TBD
40	DSS-43	70M	✔	✔	✔	✔	N/A	N/A	N/A
40	DSS-45	34HEF	✔	✔	✔	✔	N/A	N/A	N/A
40	DSS-46	26M*	✔	✔	N/A	N/A	N/A	N/A	N/A
60	DSS-54	34B1	✔	✔	✔	✔	✔	N/A	09/27/09
60	DSS-55	34B2	N/A	N/A	✔	✔	✔	N/A	N/A
60	DSS-63	70M	✔	✔	✔	✔	N/A	N/A	N/A
60	DSS-65	34HEF	✔	✔	✔	✔	N/A	N/A	N/A

N/A = Capability Not Planned

xx/xx/xx = Capability Date Recently Changed

As of: 02/04/09

✔ ✔ ✔ = Capability Recently Exists

✔ = Capability Exists

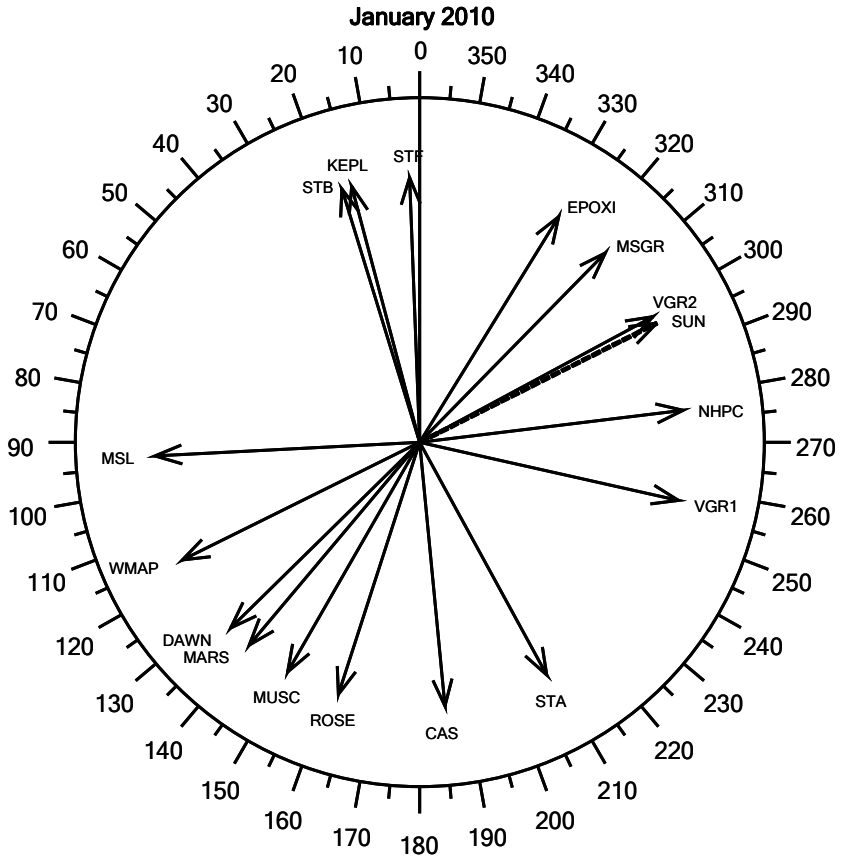
* = To Be Decommissioned

Resource Allocation Review
Periods of Contention

Legend	
05 – 08	Indicates months that DO contain contentions to be resolved
18 – 22	Indicates months that DO NOT contain contentions to be resolved
01 – 04	Indicates months without contention

Month	Weeks		
	2010	2011	2012
January	01 - 04	01 – 04	01 – 04
February	05 - 08	05 – 08	05 – 08
March	09 - 12	09 – 13	09 – 13
April	13 - 17	14 – 17	14 – 17
May	18 - 21	18 – 21	18 – 22
June	22 - 25	22 – 26	23 – 26
July	26 - 30	27 – 30	27 – 30
August	31 - 34	31 – 34	31 – 35
September	35 - 39	35 – 39	36 – 39
October	40 – 43	40 – 43	40 – 43
November	44 - 47	44 – 47	44 – 48
December	48 - 52	48 – 52	49 – 52

Resource Allocation Review
Spacecraft Right Ascension
January 2010



THE SPACECRAFT RIGHT ASCENSION FIGURES SHOW THE POSITIONS OF THE SPACECRAFT IN THE SKY RELATIVE TO EACH OTHER ON THE 15TH OF EACH MONTH FOR THE YEAR INDICATED. RIGHT ASCENSION IS COMMONLY MEASURED IN HOURS, WITH 1 HOUR = 15 DEGREES.

THE ARROW INDICATES THE CENTER OF A SPACECRAFT VIEW FROM EARTH. EXTEND 60 DEGREES ON BOTH SIDES OF THE ARROW TO CALCULATE AN EIGHT (8) HOUR VIEW PERIOD.

Resource Allocation Review
Events, Recommendations and Analyses

- The Resource Allocation Review Redbook makes reference to monthly contention as low, moderate, severe, and extreme. The explanation of these terms is listed below.

Projected unsupportable time is expressed as low, moderate, severe, or extreme in the Analysis sections of this document. Projected unsupportable time is an estimate of the amount of requested time, typically in percentage of requirements or modified requirements, that is unsupportable, based on resource availability, other users' requirements, assumed priorities, and view periods. The following percentages apply:

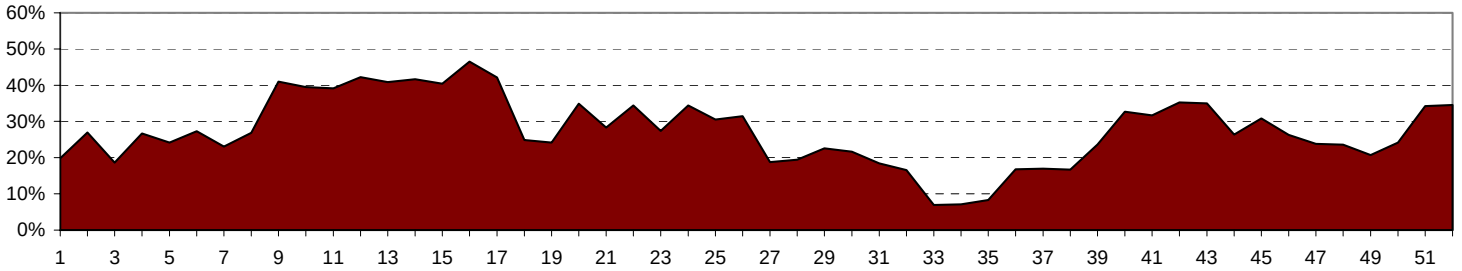
Low/Workable	= <20%
Moderate	= 20% to 30%
Severe	= 31% to 45%
Extreme	= >45%

Workable is a term used to express a condition wherein the projected unsupportable time is low. This condition occurs when the general forecasting analysis indicates a low percentage of unsupportable time or when agreements have been made to reduce contention to a workable level. Workable essentially means that experience has shown that the remaining contention may be solved during final schedule preparations and negotiations.

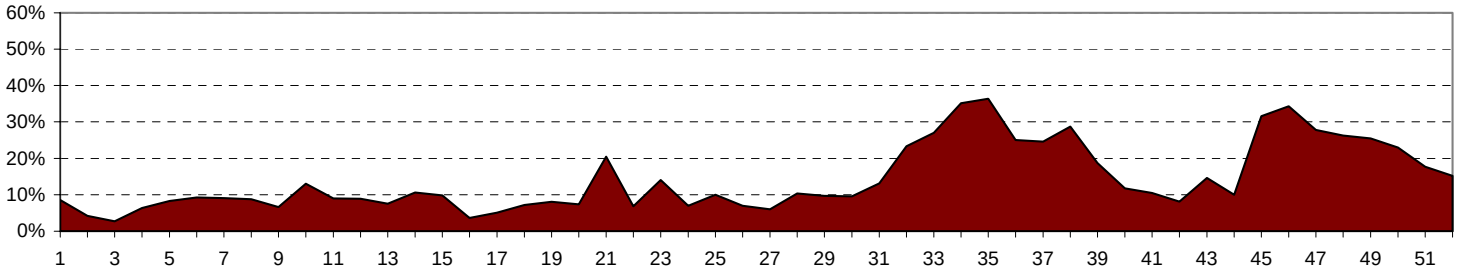
2010 Events, Recommendations and Analyses

Resource Allocation Review
Events, Recommendations and Analyses
2010 Weekly Average User Unsupportable Time

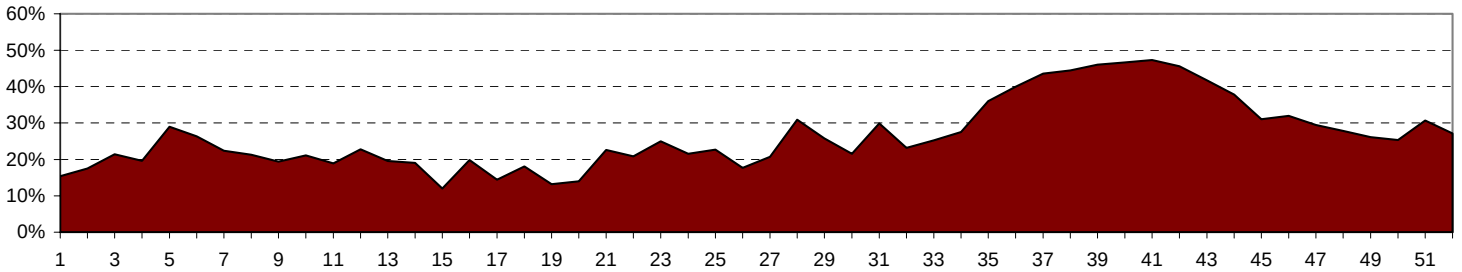
70M



34HEF

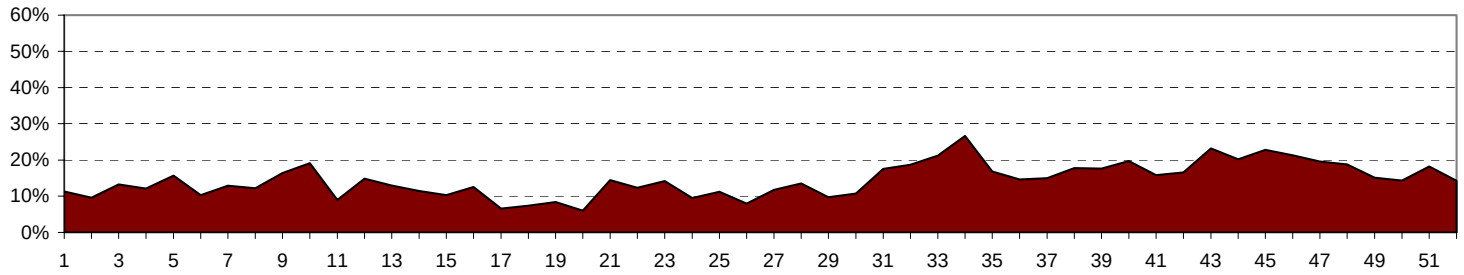


34BWG1

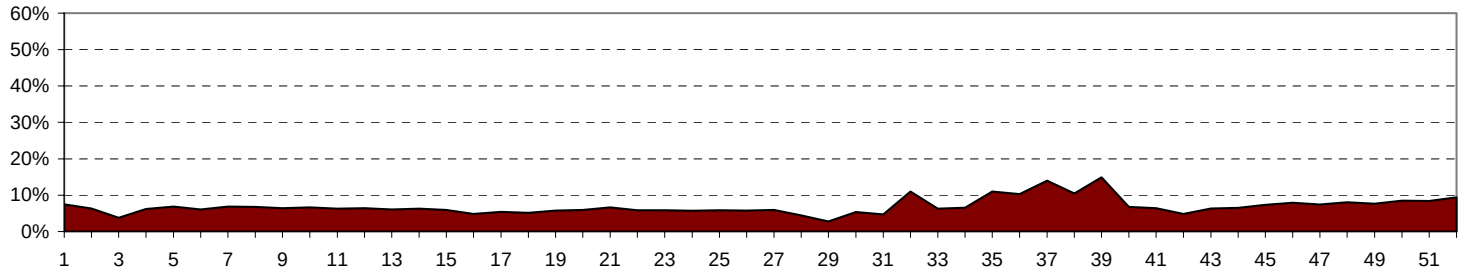


Resource Allocation Review
Events, Recommendations and Analyses
2010 Weekly Average User Unsupportable Time

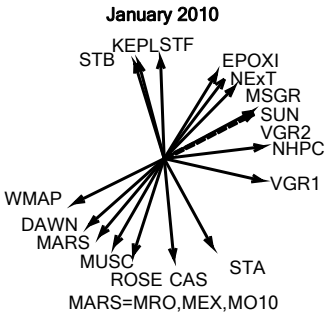
34BWG2



34HSB



Resource Allocation Review
Events, Recommendations and Analyses
2010 – January (Weeks 01 - 04)



EVENTS

DSS-14 approved downtime for Life Extension and Depot Level Maintenance (NIB to Life Extension) begins in week 01

Cassini Tour

Chandra ACA Dark Current Measurement in week 02

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 02 and 04

EPOXI Earth Flyby in week 01, Prime Shift begins in week 01, TCM begins in week 02, Delta DOR in weeks 03 and 04

INTG Redu Maintenance in weeks 02 and 04

Kepler Science Operations; Monthly Science in week 03

Mars Odyssey THEMIS begins in week 01

Mars Express Occultation; R/S Bi-Static in week 04

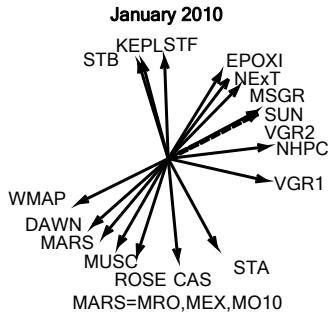
Mars Reconnaissance Orbiter Extended Science

Messenger Cruise

New Horizons Maneuver in weeks 01 and 02, Cruise Telemetry in week 03, Beacon begins in week 03

NExT Cruise 2a in weeks 01 and 02, DSM Nav begins in week 03

Resource Allocation Review
Events, Recommendations and Analyses
2010 – January (Weeks 01 - 04) (continued)



EVENTS

SGP Crustal Dynamics H-M5 in week 02, B-M5 in weeks 03 and 04

SOHO Keyhole begins in week 02

STEREO Ahead HGA CAL in week 01

STEREO Behind HGA CAL in week 01

THEMIS-B Orbit Maneuver in weeks 01 and 02, Lunar FB in weeks 02 and 03, Lunar Transfer Trajectory in weeks 03 and 04, Lunar Flyby #1 begins in week 04

THEMIS-C Orbit Maneuver

Voyager 1 DTR Array in week 01, A074 U/L BU and D/L CONF BU in week 02, Sequence A074 U/L and D/L CONF in week 02

Voyager 2 BLF U/L and BLF D/L in week 04

Resource Allocation Review
Events, Recommendations and Analyses
2010 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS

M01O THEMIS MSPA without uplink 3 passes with MEX Occultation, MSPA with uplink 3 passes with MRO Ext Science and MSPA 4 passes without uplink with MRO at 70M and MSPA without uplink 4 passes with MEX at DSS-15,55 (1)

MEX Occultation MSPA with uplink 3 pass with M01O THEMIS at 70M and MSPA the remaining 4 passes with M01O THEMIS at DSS-15,55 (1)

MRO Ext Science at MSPA 4 passes with uplink and 3 passes without uplink with M01O THEMIS at 70M and add 4 uplink passes to 34B2 (1)

This accommodates MAP (1)

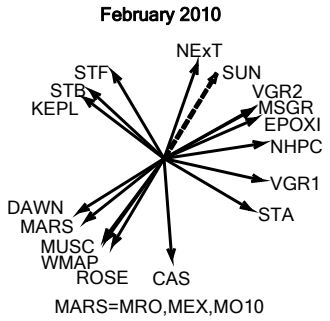
Resource Allocation Review
Events, Recommendations and Analyses
2010 – January (Weeks 01 - 04) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for DSS Maintenance, M01O THEMIS, MRO Ext Science and MEX Occultation. Contention is due to elevated MARS requirements and DSS-14 downtime.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – February (Weeks 05 - 08)



EVENTS

DSS-14 approved downtime for Life Extension and Depot Level Maintenance (NIB to Life Extension)

DSS-34 approved downtime for Azimuth Track Replacement, M1-5 Mirror Alignment and M5 Support Ring Replacement (NIB to AZ Track Replacement) begins in week 05

ATOT A01 Astrometry in week 05

Cassini Tour

Chandra Lunar Eclipse in week 06

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 06 and 08

EPOXI Prime Shift and TCM ends in week 05

Hayabusa Orbit Determination begins in week 05

INTG Redu Maintenance in week 06

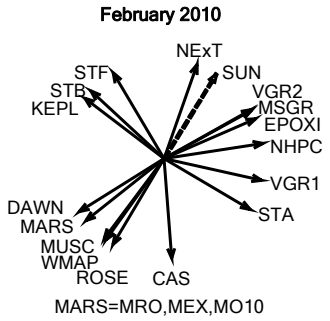
Kepler Science Operations; Monthly Science in week 07

Mars Express Occultation; R/S Bi-Static in week 08

Mars Odyssey THEMIS

Mars Reconnaissance Orbiter Extended Science; X/Ka-Delta DOR in week 08

Resource Allocation Review
Events, Recommendations and Analyses
2010 – February (Weeks 05 - 08) (continued)



EVENTS

Messenger Cruise

New Horizons Beacon; Cruise Telemetry in week 07

NExT DSM-2 in week 06, DSM Nav ends in week 06, DSM Post Nav begins in week 07

SGP Crustal Dynamics B-M5 in week 06, H-M5 in week 08

SOHO Keyhole Maneuver in week 05, Keyhole ends in week 06

THEMIS-B Lunar Flyby #1 ends in week 05, Flyby #2 in weeks 06 and 07, Lunar Transfer Trajectory ends in week 06, DST Trajectory begins in week 07

THEMIS-C Orbit Maneuver

Voyager 1 MAGROL Array in week 05

Voyager 2 BLF U/L and BLF D/L in week 05, B147 U/L BU and D/L CONF BU in week 06, Sequence B147 U/L and D/L CONF in week 06

WIND TCM in week 08

Resource Allocation Review
Events, Recommendations and Analyses
2010 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS

M01O THEMIS MSPA without uplink 3 passes with MEX Occultation, MSPA with uplink 3 passes with MRO Ext Science and MSPA 4 passes without uplink with MRO at 70M and MSPA without uplink 4 passes with MEX at DSS-15,55 (1)

MEX Occultation MSPA with uplink 3 pass with M01O THEMIS at 70M and MSPA the remaining 4 passes with M01O THEMIS at DSS-15,55 (1)

MRO Ext Science at MSPA 4 passes with uplink and 3 passes without uplink with M01O THEMIS at 70M and add 4 uplink passes to 34B2 (1)

This accommodates MAP (1)

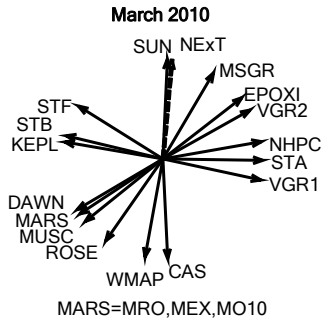
Resource Allocation Review
Events, Recommendations and Analyses
2010 – February (Weeks 05 - 08) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for DSS Maintenance, M01O THEMIS, MRO Ext Science, MEX Occultation and STF. Contention is due to elevated MARS requirements and DSS-14 downtime.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – March (Weeks 09 - 12)



EVENTS

DSS-14 approved downtime for Life Extension and Depot Level Maintenance (NIB to Life Extension)

DSS-34 approved downtime for Azimuth Track Replacement, M1-5 Mirror Alignment and M5 Support Ring Replacement (NIB to AZ Track Replacement)

Cassini Tour

Chandra ACA Dark Current Measurement in week 12

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 10 and 12

EPOXI Cruise begins week 12, Delta DOR in week 12, Prime Shift begins in week 12

Hayabusa Orbit Determination

INTG Redu Maintenance in weeks 10 and 12

Kepler Science Operations; Quarterly Roll and Science in week 12

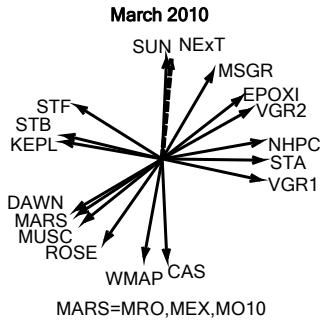
Mars Express Occultation; R/S Bi-Static in week 12

Mars Odyssey THEMIS

Mars Reconnaissance Orbiter Extended Science

Messenger Cruise; TCM in week 10

Resource Allocation Review
Events, Recommendations and Analyses
2010 – March (Weeks 09 - 12) (continued)



EVENTS

New Horizons Beacon; Cruise Telemetry in week 11

NExT DSM Post Nav ends in week 11

SGP Crustal Dynamics B-M5 in weeks 10 and 12

THEMIS-B DST Trajectory; DSM in week 11

THEMIS-C Orbit Maneuver ends in week 10, Lunar Flyby Maneuver in weeks 10 and 11, Lunar Transfer Trajectory in weeks 11 and 12, Lunar Flyby in week 12

Voyager 1 MAGROL in week 10

Voyager 2 ASCAL in week 11, MAGROL in week 11

Resource Allocation Review
Events, Recommendations and Analyses
2010 – March (Weeks 09 - 12) (continued)

RECOMMENDATIONS

M01O THEMIS MSPA without uplink 3 passes with MEX Occultation, MSPA with uplink 3 passes with MRO Ext Science and MSPA 4 passes without uplink with MRO at 70M and MSPA without uplink 4 passes with MEX at DSS-15,55 (1)

MEX Occultation MSPA with uplink 3 pass with M01O THEMIS at 70M and MSPA the remaining 4 passes with M01O THEMIS at DSS-15,55 (1)

MRO Ext Science at MSPA 4 passes with uplink and 3 passes without uplink with M01O THEMIS at 70M and add 4 uplink passes to 34B2 (1)

This accommodates MAP and STF (1)

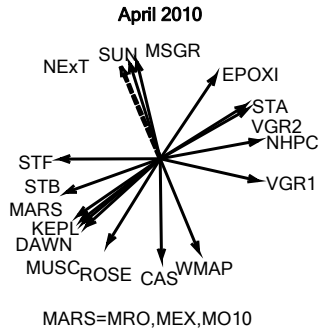
Resource Allocation Review
Events, Recommendations and Analyses
2010 – March (Weeks 09 - 12) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for DSS Maintenance, M01O THEMIS, MRO Ext Science, MEX Occultation and STF. Contention is due to elevated MARS requirements and DSS-14 downtime.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – April (Weeks 13 - 17)



EVENTS

DSS-14 approved downtime for Life Extension and Depot Level Maintenance (NIB to Life Extension) ends in week 17

DSS-34 approved downtime for Azimuth Track Replacement, M1-5 Mirror Alignment and M5 Support Ring Replacement (NIB to AZ Track Replacement) ends in week 14

ATOT A01 Image in week 17

Cassini Tour

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 14 and 16

EPOXI Prime Shift; Delta DOR in weeks 14 and 16, Cruise ends in week 17

Hayabusa Orbit Determination

INTG Redu Maintenance in weeks 13 and 15

Kepler Science Operations; Monthly Science in week 16

Mars Express Occultation; R/S Bi-Static in week 16

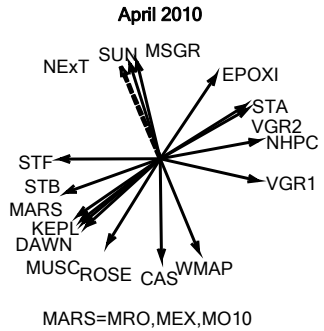
Mars Odyssey THEMIS

Mars Reconnaissance Orbiter Extended Science; X/Ka-Delta DOR in week 16

Messenger Cruise; TCM in week 15

New Horizons Beacon; Cruise Telemetry in week 15

Resource Allocation Review
Events, Recommendations and Analyses
2010 – April (Weeks 13 - 17) (continued)



EVENTS

NExT Cruise 2b in weeks 13 and 17

SGP Crustal Dynamics H-M5 in weeks 13 and 16, B-M5 in weeks 14 and 15

SOHO Keyhole begins in week 16, Keyhole Maneuver in week 17

THEMIS-B DST Trajectory; Earth Flyby in week 15

THEMIS-C DST Trajectory; DSM in week 16, Lunar Flyby in week 13

Voyager 1 A075 U/L BU and D/L CONF BU in week 14, Sequence A075 U/L and D/L CONF in week 14, DTR Array in week 17

Voyager 2 BLF U/L and BLF D/L in week 17, MAGROL in week 17

WMAP Maneuver in week 15

Resource Allocation Review
Events, Recommendations and Analyses
2010 – April (Weeks 13 - 17) (continued)

RECOMMENDATIONS

M01O THEMIS MSPA without uplink 3 passes with MEX Occultation, MSPA with uplink 3 passes with MRO Ext Science and MSPA 4 passes without uplink with MRO at 70M and MSPA without uplink 4 passes with MEX at DSS-15,55 (1)

MEX Occultation MSPA with uplink 3 pass with M01O THEMIS at 70M and MSPA the remaining 4 passes with M01O THEMIS at DSS-15,55 (1)

MRO Ext Science at MSPA 4 passes with uplink and 3 passes without uplink with M01O THEMIS at 70M and add 4 uplink passes to 34B2 (1)

This accommodates MAP and STF (1)

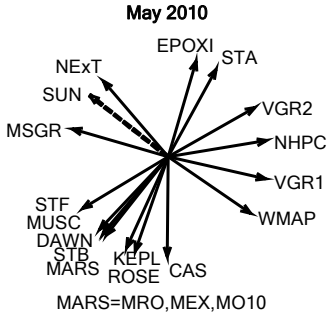
Resource Allocation Review
Events, Recommendations and Analyses
2010 – April (Weeks 13 - 17) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for DSS Maintenance, M01O THEMIS, MRO Ext Science, MEX Occultation and STF. Contention is due to elevated MARS requirements and DSS-14 downtime.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – May (Weeks 18 – 21)



EVENTS

DSS-14 proposed extended downtime for Life Extension and Depot Level Maintenance (NIB to Life Extension) in weeks 18 – 19

Cassini Tour

Chandra Earth Eclipse begins in week 18

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 18 and 20; Forced Coast in week 21

EPOXI Prime Shift; TCM begins in week 18, Delta DOR in weeks 18 and 19

GSSR Mercury in weeks 18 and 21

Hayabusa Orbit Determination; Delta DOR E/W and Delta DOR N/S in weeks 18 – 21

INTG Redu Maintenance in week 19

Kepler Science Operations; Monthly Science in week 21

Mars Express Occultation; R/S Bi-Static in week 20

Mars Odyssey THEMIS

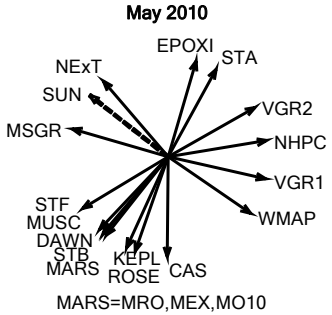
Mars Reconnaissance Orbiter Extended Science

Messenger Cruise

New Horizons Beacon ends in week 21; Checkout begins in week 21, Cruise Telemetry in weeks 19 and 20

NExT Cruise 2b in week 21

Resource Allocation Review
Events, Recommendations and Analyses
2010 – May (Weeks 18 – 21) (continued)



EVENTS

SGP Crustal Dynamics B-M5 in weeks 18, 20 and 21

SOHO Keyhole ends week 18, HSO begins in week 19

THEMIS-B DST Trajectory

THEMIS-C DST Trajectory; Earth Flyby #1 in week 19

VCO Launch support begins in week 20

Voyager 1 ASCAL in week 18; MAGROL in week 18

Voyager 2 BLF U/L and BLF D/L in week 18, B148 U/L BU and D/L CONF BU in week 19, Sequence B148 U/L and D/L CONF in week 19

WIND TCM in week 21

Resource Allocation Review
Events, Recommendations and Analyses
2010 – May (Weeks 18 – 21) (continued)

RECOMMENDATIONS

Approve extended DSS-14 downtime for Life Extension and Depot Level Maintenance (NIB to Life Extension) to end in week 19

M01O THEMIS MSPA without uplink 3 passes with MEX Occultation, MSPA with uplink 3 passes with MRO Ext Science and MSPA 4 passes without uplink with MRO at 70M and MSPA without uplink 4 passes with MEX at DSS-15,55 (1)

MEX Occultation MSPA with uplink 3 pass with M01O THEMIS at 70M and MSPA the remaining 4 passes with M01O THEMIS at DSS-15,55 (1)

MRO Ext Science at MSPA 4 passes with uplink and 3 passes without uplink with M01O THEMIS at 70M and add 4 uplink passes to 34B2 (1)

This accommodates MAP and STF (1)

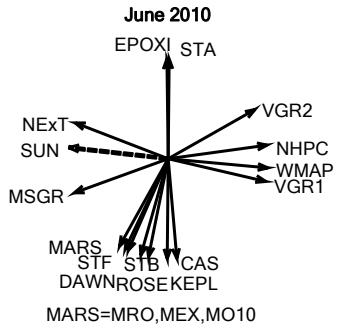
Resource Allocation Review
Events, Recommendations and Analyses
2010 – May (Weeks 18 - 21) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for DSS Maintenance, M01O THEMIS, MRO Ext Science, MEX Occultation and STF. Contention is due to elevated MARS requirements and DSS-14 downtime in weeks 18 & 19.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – June (Weeks 22 - 25)



EVENTS

DSS-15 approved downtime for Pintle Bearing in weeks 22 – 25
DSS-15 approved downtime for Gear Box Replacement (NIB to Pintle Bearing) in weeks 22 – 23

Cassini Tour

Chandra Earth Eclipse ends in week 24

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 22 and 24, Forced Coast in week 23

EPOXI Prime Shift and TCM

GSSR Asteroid 1999 MN in week 22; Mercury in week 22; Venus GBT in week 24

Hayabusa Orbit Determination ends in week 22, Re-entry in week 23, Re-entry Trim in week 23

Kepler Science Operations; Quarterly Roll and Science in week 25

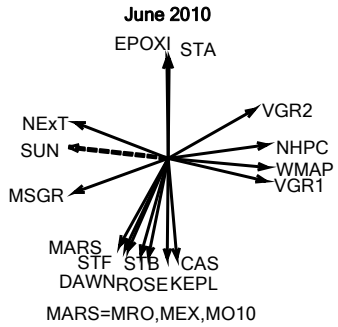
Mars Express Occultation; R/S Bi-Static in week 24

Mars Odyssey THEMIS

Mars Reconnaissance Orbiter Extended Science; X/Ka-Delta DOR in week 24

Messenger Cruise

Resource Allocation Review
Events, Recommendations and Analyses
2010 – June (Weeks 22 - 25) (continued)



EVENTS

New Horizons Checkout; Delta DOR in weeks 22 and 23,Array Test in week 23, Encounter Rehearsal in week 25, L MET CCD CMD in week 24, Maneuver in week 25

NExT Cruise 2b in week 25

Rosetta Asteroid Flyby begins in week 23

SGP Crustal Dynamics B-M5 in week 25

SOHO HSO

THEMIS-B DST Trajectory; Max Range in week 22

THEMIS-C DST Trajectory; Max Range in week 24

VCO Launch Support ends in week 24, Cruise begins in week 25

Voyager 2 MAGROL in week 24

Resource Allocation Review
Events, Recommendations and Analyses
2010 – June (Weeks 22 - 25) (continued)

RECOMMENDATIONS

M01O THEMIS MSPA without uplink 3 passes with MEX Occultation, MSPA with uplink 3 passes with MRO Ext Science and MSPA 4 passes without uplink with MRO at 70M and MSPA without uplink 4 passes with MEX at DSS-26,55 (1)

MEX Occultation MSPA with uplink 3 pass with M01O THEMIS at 70M and MSPA the remaining 4 passes with M01O THEMIS at DSS-26,55 (1)

MRO Ext Science MSPA 4 passes with uplink and 3 passes without uplink with M01O THEMIS at 70M and add 4 uplink passes to 34B2 (1)

This accommodates MAP and STF (1)

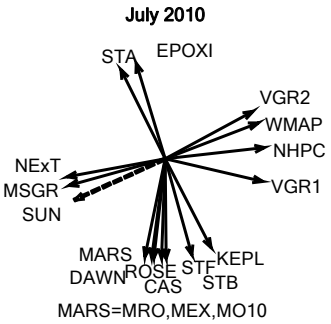
Resource Allocation Review
Events, Recommendations and Analyses
2010 – June (Weeks 22 - 25) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for DSS Maintenance, M01O THEMIS, MRO Ext Science, MEX Occultation and STF. Contention is due to elevated MARS requirements.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – July (Weeks 26 - 30)



EVENTS

DSS-15 proposed extended downtime for Pintle Bearing in weeks 26 – 29

Cassini Tour

Chandra Lunar Eclipse in week 27, ACA Dark Current Measurement in week 28

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 26, 28 and 30, Forced Coast in week 28

EPOXI Prime Shift; TCM ends in week 29, Delta DOR in week 29, Cruise begins week 30

INTG Redu Maintenance in weeks 26, 28 and 30

Kepler Science Operations; Monthly Science in week 30

Mars Express R/S Bi-Static in week 28, Occultation ends in week 30

Mars Odyssey THEMIS

Mars Reconnaissance Orbiter Extended Science

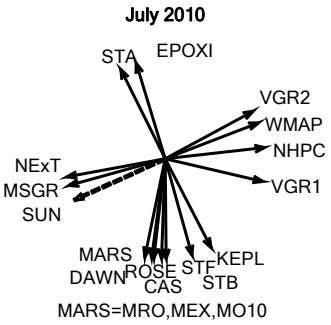
Messenger Cruise

New Horizons Array Test in week 26, Encounter Rehearsal in week 26, Delta DOR in weeks 26 – 28, L MET CCD CMD in week 29, Checkout ends week 30;

NExT Cruise 2b in week 29

Rosetta Asteroid Flyby ends in week 29

Resource Allocation Review
Events, Recommendations and Analyses
2010 – July (Weeks 26 - 30) (continued)



EVENTS

SGP Crustal Dynamics B-M5 in weeks 26 and 30, H-M5 in week 28

SOHO HSO ends in week 27, Keyhole begins in week 28, Keyhole Maneuver in week 30

STEREO Ahead HGA CAL in week 28

STEREO Behind HGA CAL in week 28

THEMIS-B DST Trajectory

THEMIS-C DST Trajectory; Earth Flyby #2 in week 30

VCO Cruise

Voyager 1 A076 U/L BU and D/L CONF BU in week 27, Sequence A076 U/L and D/L CONF in week 27

Voyager 2 BLF U/L and BLF D/L in week 30

Resource Allocation Review
Events, Recommendations and Analyses
2010 – July (Weeks 26 - 30) (continued)

RECOMMENDATIONS

Approve DSS-15 downtime for Pintle Bearing Replacement ending in week 29

M01O THEMIS MSPA without uplink 3 passes with MEX Occultation, MSPA with uplink 3 passes with MRO Ext Science and MSPA 4 passes without uplink with MRO at 70M and MSPA without uplink 4 passes with MEX at DSS-26,55 in week 26 and M01O THEMIS MSPA with uplink 3 passes with MRO Ext Science and MSPA 4 passes without uplink with MRO at 70M in weeks 27 - 30 (1)

MEX Occultation MSPA with uplink 3 pass with M01O THEMIS at 70M and MSPA the remaining 4 passes with M01O THEMIS at DSS-26,55 in week 26 (1)

MRO Ext Science MSPA 4 passes with uplink and 3 passes without uplink with M01O THEMIS at 70M and add 4 uplink passes to 34B2 (1)

This accommodates STF (1)

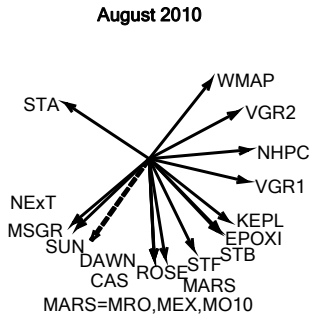
Resource Allocation Review
Events, Recommendations and Analyses
2010 – July (Weeks 26 - 30) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for DSS Maintenance, M01O THEMIS, MRO Ext Science, MEX Occultation and STF. Contention is due to elevated MARS requirements.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – August (Weeks 31 - 34)



EVENTS

DSS-25 approved downtime for Ka U/L and Depot Level Maintenance (NIB to Ka U/L) begins in week 31

DSS-65 approved downtime for Life Extension Elevation begins in week 31

Cassini Tour

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 32 and 34

EPOXI Prime Shift; Delta DOR in weeks 31 and 33, Cruise ends in week 34

GSSR Mercury GBT in week 31, Venus GBT in week 31

INTG Redu Maintenance in weeks 32 and 34

Kepler Science Operations; Monthly Science in week 34

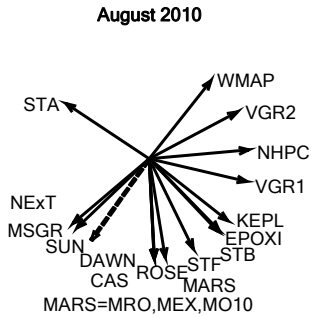
Mars Express Orb Science/THEMIS; Orbital Science begins in week 32, R/S Bi-Static in week 32

Mars Odyssey THEMIS ends in week 32

Mars Reconnaissance Orbiter Extended Science; X/Ka-Delta DOR in week 32

Messenger Cruise; TCM in week 34

Resource Allocation Review
Events, Recommendations and Analyses
2010 – August (Weeks 31 - 34) (continued)



EVENTS

New Horizons Beacon begins in week 31; Cruise Telemetry in weeks 32 and 34

NExT Cruise 2b in week 32

SGP Crustal Dynamics B-M5 in weeks 31 and 34

SOHO Keyhole Maneuver in week 31, Keyhole ends in week 32

THEMIS-B DST Trajectory ends in week 33, LL2 Orbit and Insertion in week 34

THEMIS-C DST Trajectory; L Max Range in week 34

VCO Cruise

Voyager 1 MAGROL in week 31, DTR Array in week 32

Voyager 2 BLF U/L and BLF D/L in week 31, B149 U/L BU and D/L CONF BU in week 32, Sequence B149 U/L and D/L CONF in week 32

WIND TCM in week 33

WMAP Maneuver in week 32

Resource Allocation Review
Events, Recommendations and Analyses
2010 – August (Weeks 31 - 34) (continued)

RECOMMENDATIONS

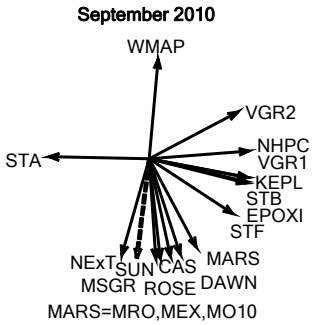
NO RECOMMENDATIONS

Resource Allocation Review
Events, Recommendations and Analyses
2010 – August (Weeks 31 - 34) (continued)

ANALYSES

Contention levels on the 70M, 34H, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – September (Weeks 35 - 39)



EVENTS

DSS-24 approved downtime for Painting and Depot Level Maintenance (NIB to Painting) in weeks 35 – 38

DSS-65 approved downtime for Life Extension Elevation ends in week 39

ATOT A01 Astrometry in week 36

Cassini Tour

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 36 and 38

EPOXI Prime Shift; Approach begins week 35, Delta DOR in weeks 35 – 38, TCM begins in week 37

GSSR Asteroid 1998 UO1 in week 39

INTG Redu Maintenance in weeks 37 and 39

Kepler Science Operations; Quarterly Roll and Science in week 38

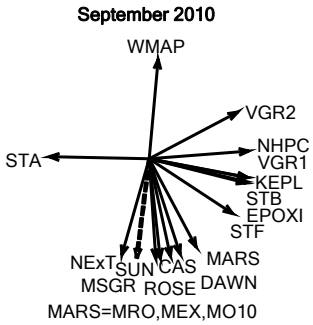
Mars Express Orbital Science; R/S Bi-Static in week 36

Mars Odyssey Mapping begins in week 36

Mars Reconnaissance Orbiter Extended Science

Messenger Cruise

Resource Allocation Review
Events, Recommendations and Analyses
2010 – September (Weeks 35 - 39) (continued)



EVENTS

New Horizons Beacon; Cruise Telemetry in week 38

NExT DSM Orbit Determination begins week 36

SGP Crustal Dynamics H-M5 in week 35, B-M5 in week 38

THEMIS-B LL2 Orbit

THEMIS-C DST Trajectory

VCO Cruise ends week 39

Voyager 1 MAGROL in week 39

Voyager 2 ASCAL in week 37, MAGROL in week 37

Resource Allocation Review
Events, Recommendations and Analyses
2010 – September (Weeks 35 - 39) (continued)

RECOMMENDATIONS

M01O Mapping MSPA without uplink 4 passes and 3 passes with uplink with MRO Ext Science at 70M in week 39 (1)

MRO Ext Science MSPA 4 passes with uplink and 3 passes without uplink with M01O Mapping at 70M in week 39 (1)

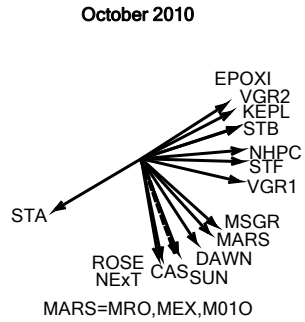
Resource Allocation Review
Events, Recommendations and Analyses
2010 – September (Weeks 35 - 39) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O Mapping, MEX Occultation, MRO Ext Science, STF, and VGR1. Contention is due to heavy view period overlap of most missions and oversubscription of the subnet.**

Contention levels on the 34H, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – October (Weeks 40 - 43)



EVENTS

DSS-24 approved downtime for Painting ends in week 42

Cassini Tour

Chandra ACA Dark Current Measurement in week 41

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 40 and 42

EPOXI Prime Shift, TCM; Delta DOR in week 40, Approach ends in week 43

GSSR Asteroid 2003 UV11 in week 43

INTG Redu Maintenance in weeks 41 and 43

Kepler Science Operations; Monthly Science in week 43

Mars Express Occultation; R/S Bi-Static in week 40

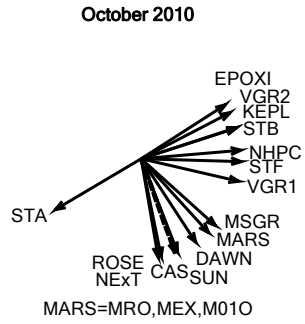
Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science; X/Ka-Delta DOR in week 40

Messenger Cruise

New Horizons Beacon; Cruise Telemetry in week 42

Resource Allocation Review
Events, Recommendations and Analyses
2010 – October (Weeks 40 - 43) (continued)



EVENTS

NExT DSM Arrival in week 41, DSM Orbit Determination ends in week 41, DSM Post Nav begins in week 42

SGP Crustal Dynamics B-M5 in week 43

SOHO Keyhole begins in week 41, Keyhole Maneuver in week 43

STEREO Ahead HGA CAL in week 40

STEREO Behind HGA CAL in week 40

THEMIS-B LL2 Orbit

THEMIS-C DST Trajectory ends in week 42, LL1 Insertion in week 42, Lunar Transfer Trajectory begins in week 42

VCO Approach/VOI

Voyager 1 A077 U/L BU and D/L CONF BU in week 40, Sequence A077 U/L and D/L CONF in week 40

Voyager 2 BLF U/L and BLF D/L in week 43, MAGROL in week 43

Resource Allocation Review
Events, Recommendations and Analyses
2010 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

M01O Mapping at 70M MSPA without uplink 4 passes with MRO Ext Science and MSPA with uplink 3 passes with MRO Ext Science (1)

MRO Ext Science at 70M MSPA 4 passes with uplink and 3 passes without uplink with M01O Mapping at 70M and add 4 uplink passes to 34B1, 34B2 (1)

This accommodates STF (1)

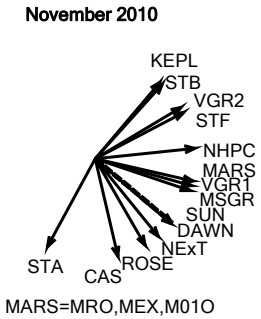
Resource Allocation Review
Events, Recommendations and Analyses
2010 – October (Weeks 40 - 43) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O Mapping, MEX Occultation, MRO Ext Science, STF, and VGR2. Contention is due to heavy viewperiod overlap of most missions and oversubscription of the subnet.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – November (Weeks 44 - 47)



EVENTS

Cassini Tour

Chandra Earth Eclipse in weeks 44, 45 and 47, Leonid Pass in weeks 45 and 46

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 44 and 46, Forced Coast in weeks 45 and 46

EPOXI Prime Shift; TCM ends in week 44, Encounter in week 44, Playback in weeks 45 and 46, Decommissioning begins in week 47

GSSR Asteroid 2002 VE68 in weeks 44 and 45, Asteroid 2003 UV11 in week 44

INTG Redu Maintenace in weeks 45 and 47

Kepler Science Operations; Monthly Science in week 47

Mars Express Occultation; R/S Bi-Static in week 44, R/S Solar Corona begins week 46

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science

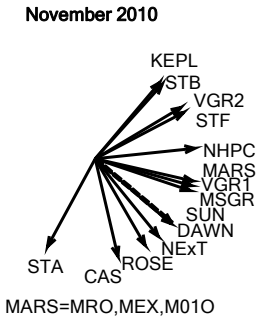
Messenger Cruise; TCM in week 45

New Horizons Beacon ends in week 44 and resumes in week 47, Cruise Telemetry in week 47, Maneuver in weeks 45 and 46

NExT DSM Post Nav ends in week 44, Cruise 2c begins in week 45

Rosetta DSM-2 begins in weeks 45

Resource Allocation Review
Events, Recommendations and Analyses
2010 – November (Weeks 44 - 47) (continued)



EVENTS

SGP Crustal Dynamics H-M5 in week 44, B-M5 in week 46

SOHO Keyhole ends in week 44

THEMIS-B LL2 Orbit

THEMIS-C Lunar Transfer Trajectory

Voyager 1 ASCAL in week 44, MAGROL in week 44

Voyager 2 BLF U/L and BLF D/L in week 44, B150 U/L BU and Sequence B150 U/L and D/L CONF in week 45, D/L CONF BU in week 45

WIND TCM in week 46

Resource Allocation Review
Events, Recommendations and Analyses
2010 – November (Weeks 44 - 47) (continued)

RECOMMENDATIONS

M01O Mapping at 70M MSPA without uplink 4 passes with MRO Ext Science and MSPA with uplink 3 passes with MRO Ext Science (1)

MRO Ext Science at 70M MSPA 4 passes with uplink and 3 passes without uplink with M01O Mapping at 70M and add 4 uplink passes to 34B1, 34B2 (1)

This accommodates STF (1)

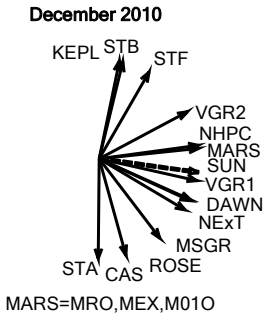
Resource Allocation Review
Events, Recommendations and Analyses
2010 – November (Weeks 44 - 47) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O Mapping, MEX Occultation, STF and VGR2. Contention is due to heavy view period overlap of most missions and oversubscription of the subnet.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2010 – December (Weeks 48 - 52)



EVENTS

ATOT A01 Image in week 51

Cassini Tour

Chandra Earth Eclipse in week 48

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 48, 50 and 52

EPOXI Prime Shift ends week 48, Decommissioning ends in week 48

GSSR Mercury in week 48

INTG Redu Maintenance in weeks 50 and 52

Kepler Science Operations; Quarterly Roll and Science in week 51

Mars Express Occultation; R/S Bi-Static in weeks 48 and 52, R/S Solar Corona

Mars Odyssey Mapping

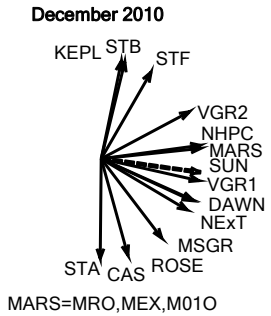
Mars Reconnaissance Orbiter Extended Science; X/Ka-Delta DOR in week 48

Messenger Cruise

New Horizons Beacon; Cruise Telemetry in week 51, Solar Conjunction in week 52

NExT Cruise 2c ends week 50, Tempel T-1 Nav begins in weeks 51

Resource Allocation Review
Events, Recommendations and Analyses
2010 – December (Weeks 48 - 52) (continued)



EVENTS

Rosetta DSM-2 ends in week 52

SGP Crustal Dynamics H-M5 in weeks 48 and 50, B-M5 in weeks 49 and 51

THEMIS-B LL2 Orbit; LL2 Departure in week 52

THEMIS-C Lunar Transfer Trajectory

Voyager 1 DTR Array in week 43

Voyager 2 MAGROL in week 50

Resource Allocation Review
Events, Recommendations and Analyses
2010 – December (Weeks 48 – 52) (continued)

RECOMMENDATIONS

M01O Mapping at 70M MSPA without uplink 4 passes with MRO Ext Science and MSPA with uplink 3 passes with MRO Ext Science (1)

MRO Ext Science at 70M MSPA 4 passes with uplink and 3 passes without uplink with M01O Mapping at 70M and add 4 uplink passes to 34B1, 34B2 (1)

This accommodates STF (1)

Resource Allocation Review
Events, Recommendations and Analyses
2010 – December (Weeks 48 - 52) (continued)

ANALYSES

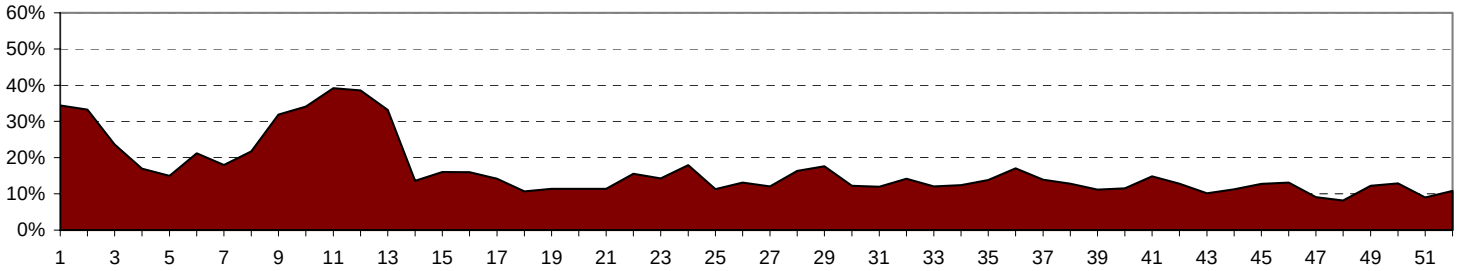
1. **(70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O Mapping, MEX Occultation, STF, VGR1 and VGR2. Contention is due to heavy view period overlap of most missions and oversubscription of the subnet.**

Contention levels on the 34HEF, 34BWG1, 34BWG2 and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

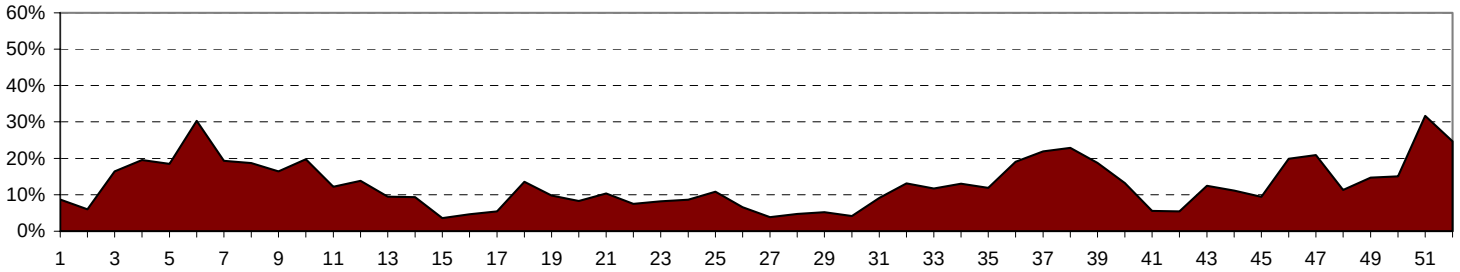
2011 Events, Recommendations and Analyses

Resource Allocation Review
Events, Recommendations and Analyses
2011 Weekly Average User Unsupportable Time

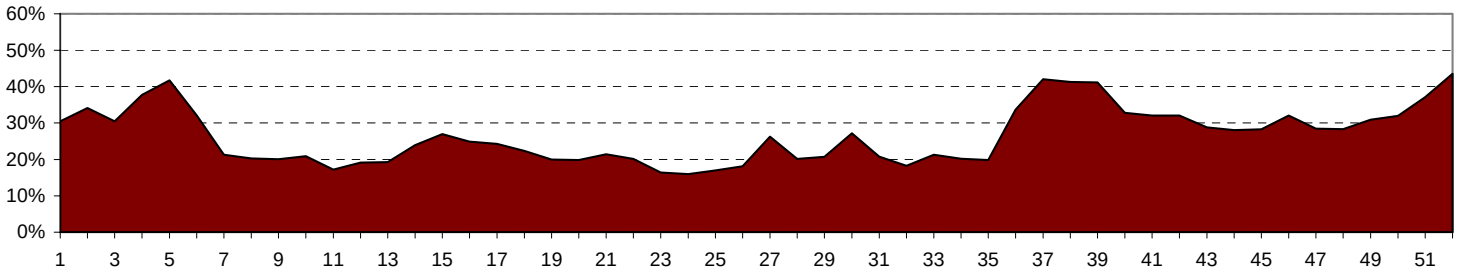
70M



34HEF

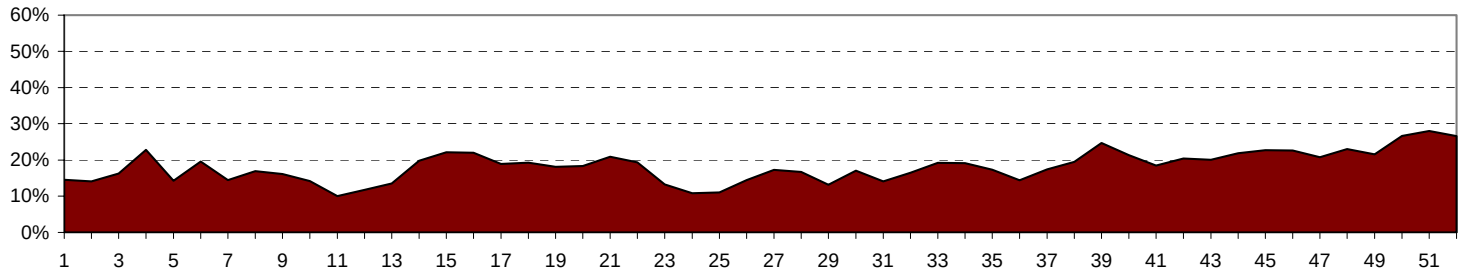


34BWG1

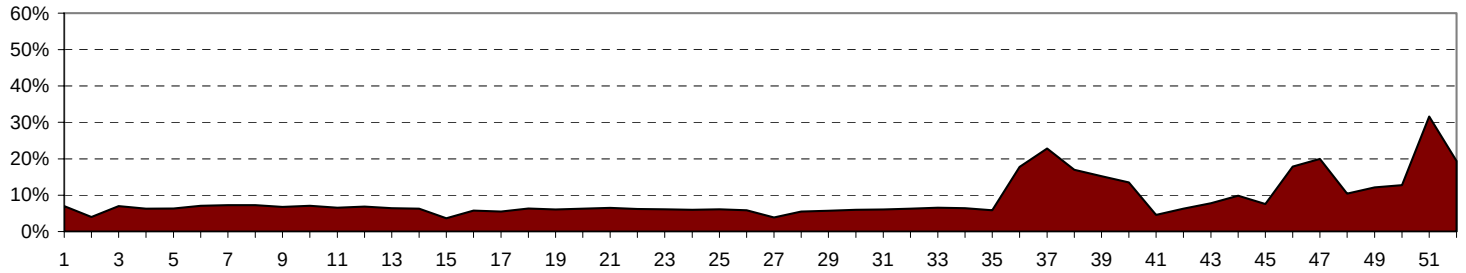


Resource Allocation Review
Events, Recommendations and Analyses
2011 Weekly Average User Unsupportable Time

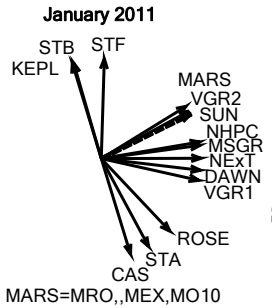
34BWG2



34HSB



Resource Allocation Review
Events, Recommendations and Analyses
2011 – January (Weeks 01 - 04)



EVENTS

ATOT A01 Astrometry in week 02

Cassini Tour

Chandra ACA Dark Current Measurement in week 02

Dawn Delta Vesta Thrust PB nd TV; DOR in weeks 02 and 04, Flight S/W Load in week 04

INTG Redu Maintenance in weeks 02 and 04

Kepler Science Operations; Monthly Science in week 04

Mars Express Radio Science Bi-Static in week 04; Radio Science Solar Corona

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science

Messenger Cruise

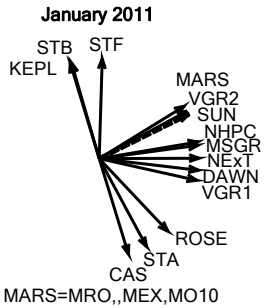
NExT T-1 Approach Maneuver in week 02; Tempel T-1 Nav ends in weeks 02, T1/T2 Approach Nav begins in weeks 03

New Horizons Maneuver in weeks 01 and 02, Cruise/Telemetry in week 03, Beacon begins in week 03

Rosetta DSM-2

SGP Crustal Dynamics H-M5 in week 02, B-M5 in week 03 and 04

Resource Allocation Review
Events, Recommendations and Analyses
2011 – January (Weeks 01 - 04) (continued)



EVENTS

SOHO Keyhole begins in weeks 01, Keyhole Maneuver in week 04

STEREO Ahead HGA CAL in week 02

STEREO Behind HGA CAL in week 02

THEMIS-B LL1 Orbit; LL1 in week 01, LL2 departure in week 01

THEMIS-C Lunar Transfer Trajectory

Voyager 1 A078 U/L BU and D/L CONF BU in week 01, Sequence A078 U/L CONF and D/L CONF in week 01

Voyager 2 BLF U/L and D/L in week 04

Wind TCM in week 01

Resource Allocation Review
Events, Recommendations and Analyses
2011 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS

M01O Mapping at 70M MSPA without uplink 4 passes with MRO ESP at 70M and M01O Mapping at 70M MSPA with uplink 3 passes with MRO ESP at 70M. (1)

MEX Solar Corona at 34H,70M MSPA without uplink 4 of 7 passes with MRO ESP at 34H. (2)

MRO ESP at 70M MSPA with uplink 4 passes with M01O Mapping at 70M and MRO ESP at 70M MSPA without uplink 3 passes with M01O Mapping at 70M. MRO ESP at 34B1,34B2 MSPA with uplink 3 of 7 passes with MEX Solar Corona at 34H. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2011 – January (Weeks 01 - 04) (continued)

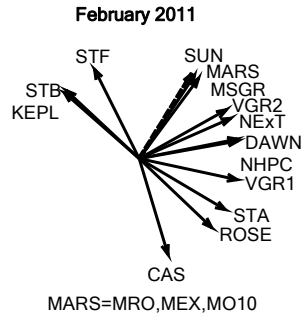
ANALYSES

1. **(70M) The projected unsupportable time is Moderate to Severe for DSS Maintenance, M01O, MEX, MRO, STF, VGR1, and VGR2. The contention is due to view period overlap with DSS Maintenance, MARS missions, and compounded by no 26M antenna.**

2. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, MEX, MRO, SOHO, STF, THB, THC, VGR2, and WIND. The contention is due to view period overlap with DSS Maintenance, MARS missions, and compounded with no 26M antenna.**

Contention levels on the 34BWG2, 34HEF, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – February (Weeks 05 - 08)



EVENTS

Cassini Tour

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 06 and 08, Side B Load in week 06

EGS Calibration in week 08, EVN J-M5 in week 08

INTG Redu Maintenance in week 06

Kepler Science Operations; Monthly Science in week 08

Mars Express Radio Science Bi-Static in week 08, R/S Solar Corona ends in week 06

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science; Delta DOR in week 08

Messenger Cruise; TCM in week 06, Delta DOR in weeks 07 and 08

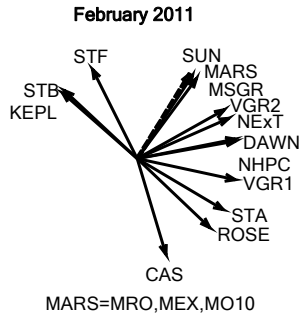
New Horizons Beacon; Cruise Telemetry in week 07

NExT Approach Nav in weeks 05 and 06, T-2 Approach Maneuver in week 05, T1/T2 Approach Nav ends in week 05, Tempel Encounter begins in weeks 06

Rosetta DSM-2

SGP Crustal Dynamics B-M5 in week 06, H-M5 in week 08

Resource Allocation Review
Events, Recommendations and Analyses
2011 – February (Weeks 05 - 08) (continued)



EVENTS

SOHO Keyhole ends in week 06

THEMIS-B LL1 Orbit

THEMIS-C Lunar Transfer Trajectory

Voyager 1 MAGROL in week 05

Voyager 2 BLF D/L and U/L in week 05, B151 U/L BU and D/L CONF in week 06, Sequence B151 U/L and D/L week 06

Resource Allocation Review
Events, Recommendations and Analyses
2011 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS

MEX Solar Corona at 34H,70M MSPA without uplink 4 of 7 passes with MRO ESP at 34B1, 34B2. (1)

MRO ESP at 34B1,34B2 MSPA with uplink 3 of 7 passes with MEX Solar Corona at 34B1,34B2. (1)

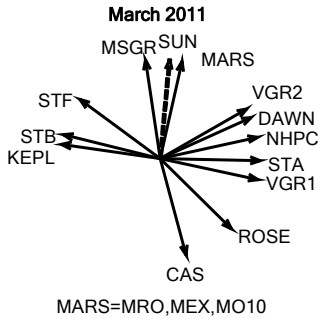
Resource Allocation Review
Events, Recommendations and Analyses
2011 – February (Weeks 05 - 08) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, MEX, MRO, SOHO, STF, THB, THC, VGR2, and WIND. The contention is due to view period overlap with DSS Maintenance, MARS missions, and compounded with no 26M antenna.**

Contention levels on the 70M, 34BWG2, 34HEF, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2011 – March (Weeks 09 - 13)



EVENTS

Cassini Tour

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 10 and 12, Forced Coast in week 10 and 12

EGS Global VLBI in week 09

INTG Redu Maintenance in weeks 09, 11, and 13

Kepler Science Operations; Quarterly Roll and Science in week 13

Mars Express Orbital Science begins in weeks 10, Radio Science Bi-Static in week 12

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science

Messenger Cruise ends in week 09, Delta DOR in weeks 09 and 10, MOI (DOY 077) in weeks 09 – 13, Prime Science begins in week 13, TCM in weeks 09 and 11

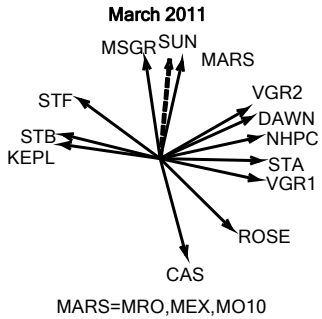
New Horizons Beacon ends in week 12, Checkout in weeks 12 and 13, Cruise Telemetry in week 11, Radio Occultation in week 12

NExT Tempel Encounter in week 09, Decommission weeks 10 – 13

Rosetta DSM-2 ends in week 09, DSHM Entry in weeks 09 – 13

SGP Crustal Dynamics B-M5 in weeks 10 and 12, H-M5 in week 13

Resource Allocation Review
Events, Recommendations and Analyses
2011 – March (Weeks 09 - 13) (continued)



EVENTS

THEMIS-B LL1 Orbit; Lunar Transfer Initiation in week 13

THEMIS-C Lunar Transfer Trajectory; Lunar Transfer Initiation in week 13

Voyager 1 MAGROL in week 10, DTR Array in week 12

Voyager 2 ASCAL in week 11, MAGROL in week 11

Resource Allocation Review
Events, Recommendations and Analyses
2011 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS

DSS Maintenance delete to accommodate MSGR MOI in weeks 11 and 12. (1)

M01O Mapping MSPA without uplink 7 passes with MRO ESP at 34B1,34B2,34H. (1)

MEX Orbital Science MSPA without uplink 4 of 7 passes with MRO ESP at 34B1,34B2,34H. (2)

MRO ESP MSPA with uplink 7 passes with M01O Mapping at 34B1,34B2,34H. MRO ESP MSPA with uplink 3 of 7 passes with MEX Orbital Science at 34B1,34B2,34H. (1,2)

MSGR accommodate DSS Maintenance in weeks 09, 10 and 13. (1)

STF at DSS-14/24,63/54 shift to 34B1,34B2 to accommodate MSGR MOI and coordinate to obtain minimum requirement on the 70M during available time. (1)

Resource Allocation Review
Events, Recommendations and Analyses
2011 – March (Weeks 09 - 13) (continued)

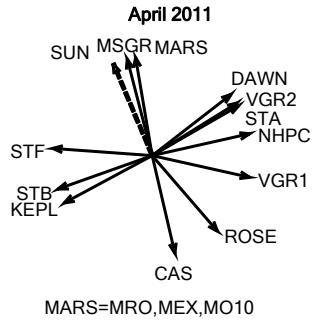
ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for DSS Maintenance, M01O Mapping, MEX Orbital Science, MRO ESP, MSGR MOI, STF, and VGR2. The contention is due to heavy contention with Messenger MOI continuous coverage, DSS Maintenance, and MARS missions. Therefore, recommending MARS Mission supports on the 70M shift to 34B1, 34B2, 34H to accommodate MSGR MOI.**

2. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, MEX Orbital Science, MRO ESP, MSGR , STF, THB, THC, VGR2, and WIND. The contention is due to view period overlap with DSS Maintenance, MARS missions, and compounded with no 26M antenna.**

Contention levels on the 34BWG2, 34HEF, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations, and coordination with DSS Maintenance, other missions, and MSGR MOI activities are required to fulfill the MOI requirements on the 70M.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – April (Weeks 14 - 17)



EVENTS

DSS-63 approved downtime for Life Extension begins in week 16

ATOT A01 Image in week 17

Cassini Tour

Chandra ACA Dark Current Measurement in week 15, Earth Eclipse begins in week 15

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 14 and 16, Vesta Approach begins in week 17

INTG Redu Maintenance in weeks 15 and 17

Kepler Science Operations; Monthly Science in week 17

Mars Express Orbital Science; Radio Science Bi-Static in week 16

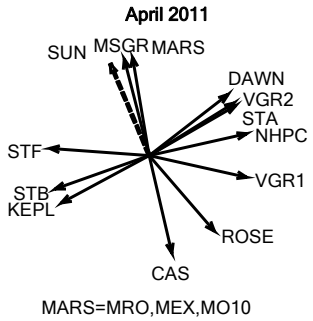
Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science; X/Ka-Delta DOR in week 16

Messenger Prime Science

New Horizons Cruise Telemetry in week 15, Beacon begins in week 14

Resource Allocation Review
Events, Recommendations and Analyses
2011 – April (Weeks 14 - 17) (continued)



EVENTS

SGP Crustal Dynamics B-M5 in weeks 14 and 15, H-M5 in week 16

SOHO Keyhole in weeks 14 and 17, Keyhole Maneuver in week 16

STEREO Ahead HGA CAL in week 14

STEREO Behind HGA CAL in week 14

THEMIS-B LOI in week 16 (DOY 110), LOM in weeks 16 and 17, Lunar Transfer Trajectory in weeks 14 – 16, Lunar Science Phase begins in week 17

THEMIS-C Lunar Transfer Trajectory ends in week 14, LOI in week 14 (DOY 098), LOM in weeks 14 and 15, Lunar Science Phase begins in week 15

Voyager 1 A079 U/L BU and D/L CONF BU in week 14, DTR Array in week 17, Sequence A079 U/L and D/L CONF in week 14

Voyager 2 BLF U/L and D/L in week 17, MAGROL in week 17

Wind TCM in week 14

Resource Allocation Review
Events, Recommendations and Analyses
2011 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

MEX Orbital Science at 34H,34B1,34B2,70M MSPA without uplink 7 of 7 passes with MRO ESP at 34B1,34B2. (1)

MRO ESP at 34B1,34B2 MSPA with uplink 7 of 7 passes with MEX Orbital Science at 34B1,34B2. (1)

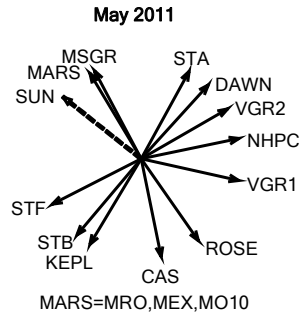
Resource Allocation Review
Events, Recommendations and Analyses
2011 – April (Weeks 14 - 17) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to extreme for ACE, DSS Maintenance, MEX Orbital Science, MRO ESP, MSGR, STA, THB, THC, VGR2, and WIND. Contention is due to view period overlap with MARS missions, elevated requirements for MSGR Prime Science, DSS-63 downtime, and compounded with no 26M antenna.**

Contention levels on the 70M, 34BWG2, 34HEF, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2011 – May (Weeks 18 – 21)



EVENTS

DSS-63 approved downtime for Life Extension

Cassini Tour

Chandra Earth Eclipse

Dawn Vesta Thrust PB and TV; Delta DOR in weeks 18 and 20, Vesta Approach

EGS Global VLBI in week 21

INTG Redu Maintenance in weeks 19 and 21

Kepler Science Operations; Monthly Science in week 21

Mars Express Orbital Science; Radio Science Bi-Static in week 20

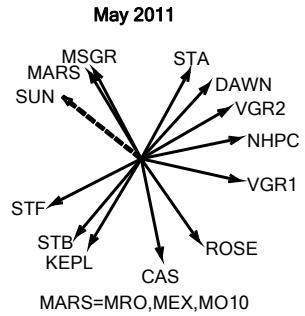
Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science

Messenger Prime Science

New Horizons Beacon ends in week 18, Array Test in week 20, Checkout begins in week 19, Cruise/Telemetry in week 18, Delta DDOR in weeks 19 and 20, L MET CCD CMD in week 21, Radio Science Occultation in week 20

Resource Allocation Review
Events, Recommendations and Analyses
2011 – May (Weeks 18 – 21) (continued)



EVENTS

SGP Crustal Dynamics B-M5 in week 18, 20 and 21, H-M5 in week 19

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 ASCAL and MAGROL in week 18

Voyager 2 B152 Uplink BU in week 19, BLF Downlink/Uplink in week 18, Downlink Conference BU in week 19, Sequence B152 Uplink and Downlink Conference in week 19

Resource Allocation Review
Events, Recommendations and Analyses
2011 – May (Weeks 18 - 21) (continued)

RECOMMENDATIONS

MEX Orbital Science at 34H,34B1,34B2,70M MSPA without uplink 7 of 7 passes with MRO ESP at 34H. (1)

MRO ESP at 34B1,34B2 MSPA with uplink 7 of 7 passes with MEX Orbital Science at 34H. (1)

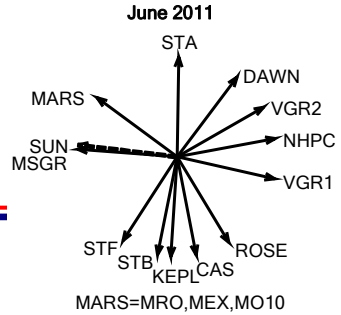
Resource Allocation Review
Events, Recommendations and Analyses
2011 – May (Weeks 18 - 21) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to extreme for DSS Maintenance, MEX Orbital Science, MRO ESP, MSGR Prime Science, STF, THB, THC, and VGR2. Contention is due to elevated requirements for MSGR Prime Science, DSS-63 downtime, and no 26M antenna. Currently there are no MSPA activities requested.**

Contention levels on the 70M, 34BWG2, 34HEF, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2011 – June (Weeks 22 - 26)



EVENTS

DSS-63 approved downtime for Life Extension ends in week 26

ATOT Mission in week 22

Cassini Tour

Chandra Earth Eclipse ends in week 23, Lunar Eclipse in week 22 and 26

Dawn Vesta Approach; Vesta Thrust PB and TV

INTG Redu Maintenance in weeks 24 and 26

Kepler Quarterly Roll and Science Operations in week 26

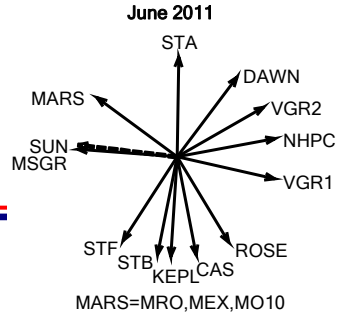
Mars Express Occultation begins in weeks 23, Orbiter Science ends in week 22, Radio Science Bi-Static in week 24

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science; X/Ka-Delta DOR in week 24

Messenger Prime Science; TCM in week 24

Resource Allocation Review
Events, Recommendations and Analyses
2011 – June (Weeks 22 - 26) (continued)



EVENTS

New Horizons Checkout; Array Test in week 23, Cruise/Telemetry in week 23, Delta DDOR in weeks 24 and 25, L MET CCD CMD in week 25, Maneuver in week 25

SGP Crustal Dynamics B-M5 in weeks 25 and 26, H-M5 in week 23

SOHO Keyhole begins in week 26

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 2 MAGROL in week 24

Resource Allocation Review
Events, Recommendations and Analyses
2011 – June (Weeks 22 - 26) (continued)

RECOMMENDATIONS

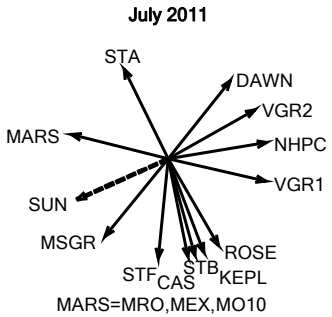
NO RECOMMENDATIONS

Resource Allocation Review
Events, Recommendat and Analyses
2011 – June (Weeks 22 - 26) (continued)

ANALYSES

Contention levels on the 70M, 34BWG1, 34BWG2, 34HEF, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2011 – July (Weeks 27 - 30)



EVENTS

DSS-63 proposed extended downtime for Life Extension in weeks 27 – 39

Cassini Tour

Chandra ACA Dark Current Measurement in week 28

Dawn Vesta Approach ends in week 30, Vesta Thrust PB and TV ends in week 30

INTG Redu Maintenance in weeks 28 and 30

Kepler Science Operations; Monthly Science in week 30

Mars Express Occultation, Radio Science Bi-Static in week 28

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science

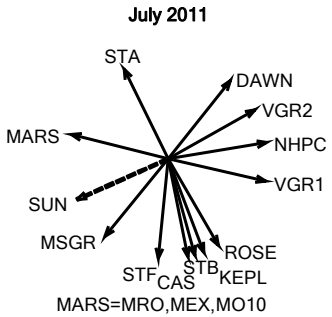
Messenger Prime Science

New Horizons Beacon begins in week 27, Cruise Telemetry in week 28

SGP Crustal Dynamics B-M5 in week 30, H-M5 in week 28

SOHO Keyhole; Maneuver in week 29

Resource Allocation Review
Events, Recommendations and Analyses
2011 – July (Weeks 27 - 30) (continued)



EVENTS

STEREO Ahead HGA CAL in week 28

STEREO Behind HGA CAL in week 28

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 A080 U/L and D/L Conference BU in week 27, Sequence A080 U/L and D/L CONF in week 27

Voyager 2 BLF U/L and D/L in week 30

WIND TCM in week 27

Resource Allocation Review
Events, Recommendations and Analyses
2011 – July (Weeks 27 - 30) (continued)

RECOMMENDATIONS

Approve extended DSS-63 downtime for Life Extension.

MEX Occultation at 34H,70M MSPA with uplink 6 of 7 passes with MRO ESP at 34H, and remaining 1 pass for MEX Bi-Static MSPA without uplink with MRO ESP. (1)

MRO ESP at 34B1,34B2 MSPA without uplink 6 of 7 passes with MEX Occultation at 34H and the remaining 1 pass for MRO ESP MSPA with uplink with MEX Bi-Static. (1)

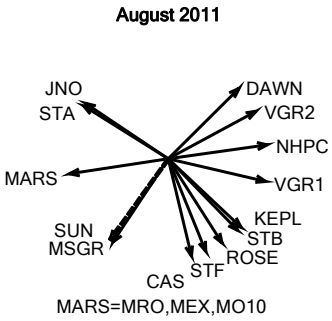
Resource Allocation Review
Events, Recommendations and Analyses
2011 – July (Weeks 27 - 30) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, MRO, MSGR Prime Science, STF, THB, THC, VGR2, and WIND. Contention is due to view period overlap with MARS Mission, elevated MSGR Prime Science, and compounded by DSS-63 downtime and no 26M antenna. Currently there are no MSPA activities requested.**

Contention levels on the 70M, 34HEF, 34BWG2, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2011 – August (Weeks 31 - 34)



EVENTS

DSS-63 proposed extended downtime for Life Extension

Cassini Tour

Dawn Vesta Orbit begins in week 31

INTG Redu Maintenance in weeks 32 and 34

Kepler Science Operations

JUNO Launch begins in week 31, LEOP begins in week 32

Mars Express Occultation; Radio Science Bi-Static in week 32

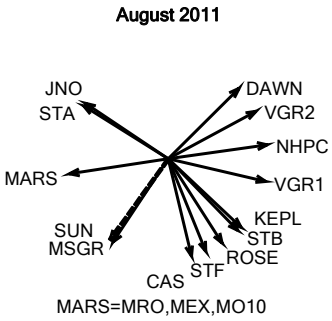
Mars Odyssey Mapping

Mars Reconnaissance Orbiter Ext ESP; X/Ka-Delta DOR in week 32

Messenger Prime Science

New Horizons Beacon; Cruise Telemetry in week 32

Resource Allocation Review
Events, Recommendations and Analyses
2011 – August (Weeks 31 - 34) (continued)



EVENTS

SGP Crustal Dynamics B-M5 in weeks 31, 33 and 34

SOHO Keyhole ends in week 31

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 MAGROL in week 31

Voyager 2 B153 U/L BU and D/L CONF BU in week 32, BLF U/L and D/L in week 31, Sequence B153 U/L and D/L CONF in week 32

Resource Allocation Review
Events, Recommendations and Analyses
2011 – August (Weeks 31 - 34) (continued)

RECOMMENDATIONS

Approve extended DSS-63 downtime for Life Extension.

M01O Mapping at 70M MSPA without uplink 3 of 7 passes with MEX Occultation at 70M starting in week 32. (1)

MEX Occultation at 34H,70M MSPA with uplink 3 of 7 passes with M01O Mapping at 70M and MEX Occultation at 34H,70M MSPA with uplink the remaining 4 passes with MRO ESP at 34B1,34B2 starting in week 32. (1)

MRO ESP at 34B1,34B2 MSPA without uplink 4 of 7 passes with MEX Occultation at 34B1,34B2 starting in week 32. (1)

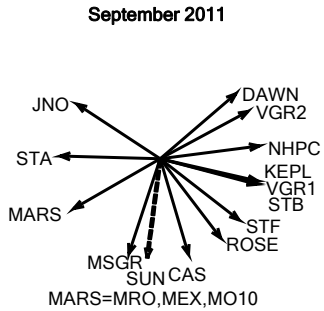
Resource Allocation Review
Events, Recommendations and Analyses
2011 – August (Weeks 31 - 34) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, MRO, MSGR Prime Science, STF, THB, THC, VGR2, and WIND. Contention are due to missions moving out of 34H to support Juno LEOP, view period overlap with MARS missions, MSGR Prime Science, compounded by DSS-63 downtime, and no 26M antenna. Currently there are no MSPA activities requested.**

Contention levels on the 70M, 34HEF, 34BWG2, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2011 – September (Weeks 35 - 39)



EVENTS

DSS-63 proposed extended downtime for Life Extension ends in week 39

ATOT A01 Image in week 35, A01 Astrometry in week 37

Cassini Tour

Chandra Earth Eclipse begins in week 38

Dawn Vesta Orbit

GRAIL-A Launch in week 36, Launch /TCM A2 in weeks 36 – 39

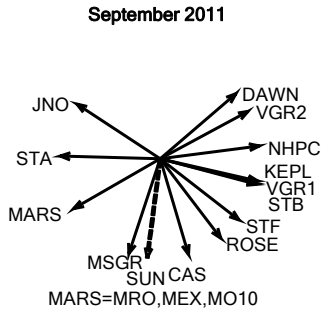
GRAIL-B Launch in week 36, Launch /TCM in weeks 36 – 39

INTG Redu Maintenance in weeks 37 and 39

JUNO Cruise begins in week 38, LEOP ends in week 36, TCM in weeks 36 and 37

Kepler Science Operations; Monthly Science in week 35, Quarterly Roll and Science in week 39

Resource Allocation Review
Events, Recommendations and Analyses
2011 – September (Weeks 35 - 39) (continued)



EVENTS

Mars Express Occultation ends in week 37, Radio Science Bi-Static in week 36, Orbital Science begins in week 38

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Extended Science

Messenger Prime Science; TCM in week 36

New Horizons Beacon; Cruise Telemetry in week 36

SGP Crustal Dynamics H-M5 in week 35, B-M5 in weeks 36, 38 and 39

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 MAGROL in week 39

Voyager 2 ASCAL and MAGROL in week 37

Resource Allocation Review
Events, Recommendations and Analyses
2011 – September (Weeks 35 - 39) (continued)

RECOMMENDATIONS

DSS approve proposed extended DSS-63 downtime for Life Extension ending in week 39.

DSS Maintenance reduce most activities starting in week 37 and 38 per previous RAR agreement for GRAIL Launch support. (1,2)

M01O Mapping at 70M MSPA 4 of 7 passes with MRO Ext ESP at 34B1,34B2 and move to 70M.

MEX Orbital Science at 34H MSPA 3 of 7 passes with MRO Ext ESP at 34B1,34B2 and move to 70M.

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 passes with MEX Orbital Science at 34H and move to 70M and MSPA 4 of 7 passes with M01O Mapping at 70M.

MSGR Prime Science Move 2 of 12 passes at DSS-25,34,55 to DSS-34,45 and move remaining passes to DSS-25,55

STA move 1 of 7 passes from DSS-26,34,55 to DSS-34,45 and remaining 6 passes to DSS-25,55.

STB move 1 of 7 passes from DSS-26,34,54 to DSS-34,45 and remaining 6 passes to DSS-25,55.

VGR2 reduce 7 of 7 8-hour passes at DSS-43,45,34 to 4-hours and change to DSS-43,45.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – September (Weeks 35 - 39) (continued)

RECOMMENDATIONS

Reactivate DSS-46 for use by, ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC.

Add S-Band Uplink capability to DSS-15 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Add S-Band Uplink and Downlink capability to DSS-55 ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – September (Weeks 35 - 39) (continued)

ANALYSES

(34BWG1, 34BWG2, 34HEF, DSS-27) The projected unsupportable time is moderate to extreme for ACE, CAS, DSS Maintenance, GRLA, GRLB, INTG, KEPL, MEX, MRO, MSGR, STA, STB, STF, THB, THC, VGR2, and WIND. The contention is due to oversubscription of the subnet in support of GRLA and GRLB launch and early orbit support, compounded by DSS-63 downtime.

There are only 5 antennas capable of supporting the GRAIL mission with both X and S-band, DSS-24, DSS-34, DSS-45, DSS-54, DSS-65. These 5 antennas would need to be dedicated to GRAIL at every Moon view. GRLA and B are requesting dual continuous support for Launch and Early Orbit. Additional resources are required to support other mission requirements and to provide support during maintenance. It is recommended that additional S-Band or S/X-Band resources be made available for other users as well as for GRAIL and THEMIS.

At Goldstone only one antenna is fully capable of supporting a GRAIL spacecraft. The other GRAIL spacecraft will need two antennas to support it with S or X-Band. This further reduces capacity and increases contention for all other missions. We therefore recommend that an S-Band uplink capability be added to DSS-15 so that it may support in standalone mode.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – September (Weeks 35 - 39) (continued)

ANALYSES

(34BWG1, 34BWG2, 34HEF, DSS-27 Continued)

Canberra capacity does not allow other missions including maintenance to be supported when both GRAIL spacecraft are in continuous or near continuous coverage. We therefore recommend that DSS-46 be reactivated during the GRAIL mission.

Madrid will support GRAIL and THEMIS with DSS-54 and DSS-65, this will not be sufficient to support all 4 spacecraft as well as maintenance. Attempting to do so will also prevent all other missions from achieving full requirement. We therefore recommend that DSS-55 be upgraded with an S-Band transmitter and receiver.

Failure to provide DSS-15 S-Band uplink upgrade and DSS-46 reactivation as additional resources during GRAIL continuous periods will require a reduction of at least 12 passes from the following missions CAS, M01O, MRO, MSGR, MEX, STA, STB, STF, THB and THC.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – September (Weeks 35 - 39) (continued)

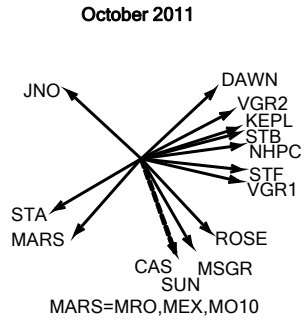
ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to extreme for ACE, CAS, DSS Maintenance, GRLA, GRLB, INTG, KEPL, MEX, MRO, MSGR, STA, STB, STF, THB, THC, VGR2, and WIND. Contention is due to GRLA and GRLB launch and dayshift view during initial trajectory, compounded by DSS-63 downtime, and no 26M antenna. Currently there are no MSPA activities requested.**

2. **(34HEF) The projected unsupportable time is moderate to severe for DSS Maintenance, GRLA, GRLB, MEX, SOHO, THB, THC, VGR2. Contention is due to GRLA and GRLB launch and dayshift view during initial trajectory, compounded by DSS-63 downtime, and no 26M antenna.**

Contention levels on the 70M, 34BWG2, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – October (Weeks 40 - 43)



EVENTS

Cassini Tour

Chandra Earth Eclipse; ACA Dark Current Measurement in week 41

Dawn Vesta Orbit

GRAIL-A Cruise

GRAIL-B Cruise

INTG Redu Maintenance in weeks 41 and 43

JUNO Cruise ends in week 40, TCM in weeks 41 and 42, Cruise resumes in week 43

Kepler Science Operations

Mars Express Orbital Science; Radio Science Bi-Static in week 40

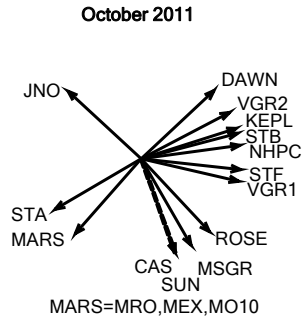
Mars Odyssey Mapping

Mars Reconnaissance Orbiter Ext ESP; X/Ka-Delta DOR in week 40

Messenger Prime Science

New Horizons Beacon; Cruise Telemetry in week 40

Resource Allocation Review
Events, Recommendations and Analyses
2011 – October (Weeks 40 - 43) (continued)



EVENTS

SGP Crustal Dynamics B-M5 in week 43

SOHO Keyhole, Maneuver in week 42

STEREO Ahead HGA CAL in week 40

STEREO Behind HGA CAL in week 40

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 A081 U/L BU in week 40, Sequence A081 U/L and D/L CONF in week 40, DTR Array in week 43

Voyager 2 BLF D/L and BLF U/L in week 43, MAGROL in week 43

WIND TCM in week 40

Resource Allocation Review
Events, Recommendations and Analyses
2011 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

MEX Orbital Science at 34H,34B1,34B2, 70M MSPA without uplink 4 passes with MRO ESP at 70M and MEX Orbital Science at 34H,34B1,34B2,70M MSPA with uplink 3 passes with MRO ESP at 70M. (1)

MRO ESP at 34B1,34B2 MSPA with uplink 4 passes with MEX Orbital Science at 70M and MRO ESP at 34B1,34B2 MSPA without uplink 3 passes with MEX Orbital Science at 70M. (1)

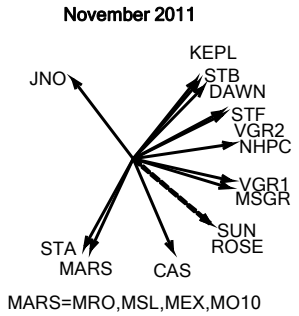
Resource Allocation Review
Events, Recommendations and Analyses
2011 – October (Weeks 40 - 43) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, CAS, DSS Maintenance, GRLA, GRLB, MEX, MRO, MSGR, SOHO, STA, STB, STF, THB, THC, VGR2, and WIND. Contention is due to GRLA and GRLB, the MARS missions, and compounded by no 26M antenna.**

Contention levels on the 70M, 34BWG2, 34HEF, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – November (Weeks 44 - 47)



EVENTS

Cassini Tour

Chandra Earth Eclipse ends in week 45, Leonid Pass in weeks 46 and 47

Dawn Vesta Orbit

EGS Global VLBI in week 45

GRAIL-A Cruise

GRAIL-B Cruise

GSSR GODR in weeks 44 and 46

INTG Redu Maintenance in weeks 45 and 47

JUNO HV Checkout; Cruise begins in week 47, DSMs Delta DOR in week 46

Kepler Science Operations; Monthly Science in week 44

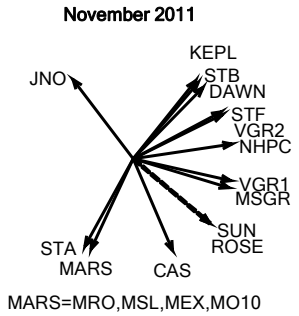
Mars Express Orbital Science; Radio Science Bi-Static in week 44

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Ext ESP

Messenger Prime Science

Resource Allocation Review
Events, Recommendations and Analyses
2011 – November (Weeks 44 - 47) (continued)



EVENTS

New Horizons Beacon ends in week 45, Cruise Telemetry in week 44, Checkout in weeks 45 and 46, Beacon begins in week 47

SGP Crustal Dynamics H-M5 in week 44, B-M5 in week 46

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 ASCAL in week 44

Voyager 2 BLF U/L and BLF D/L in week 44; B154 U/L BU in week 45, D/L CONF BU, Sequence B154 U/L and D/L CONF in week 45

Resource Allocation Review
Events, Recommendations and Analyses
2011 – November (Weeks 44 - 47) (continued)

RECOMMENDATIONS

MEX Orbital Science at 34H,34B1,34B2,70M MSPA without uplink 4 passes with MRO ESP at 70M, and MEX Orbital Science at 34H,34B1,34B2,70M MSPA with uplink 3 passes with MRO ESP at 70M. (1)

MRO ESP at 34B1,34B2 MSPA with uplink 4 passes with MEX Orbital Science at 70M, and MRO ESP at 34B1,34B2 MSPA without uplink 3 passes with MEX Orbital Science at 70M. (1)

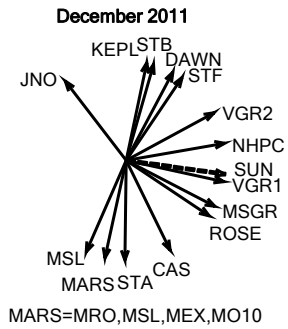
Resource Allocation Review
Events, Recommendations and Analyses
2011 – November (Weeks 44 - 47) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, CAS, DAWN Vesta Orbit, DSS Maintenance, GRLA, GRLB, KEPL, MEX, MRO, MSGR, STA, STB, THB Lunar Sci/Phase, THC Lunar Sci/Phase, VGR2, and WIND. Contention is due to GRLA and GRLB missions, the MARS missions, and compounded by no 26M antenna.**

Contention levels on the 70M, 34BWG2, 34HEF, and 34HSB subnets are workable and should resolve during final schedule preparations and negotiations.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – December (Weeks 48 - 52)



EVENTS

Cassini Tour

Dawn Vesta Orbit

GRAIL-A Cruise ends in week 50, TCM-A5/LOI-A in weeks 51 and 52

GRAIL-B Cruise ends in week 50, TCM/LOI in weeks 51 and 52

GSSR Ast 2000 YA in week 52, Ast 2003 AK18 in week 53

INTG Redu Maintenance in weeks 49 and 51

JUNO Cruise

Kepler Science Operations; Monthly Science in week 48, Quarterly Roll Science in week 52

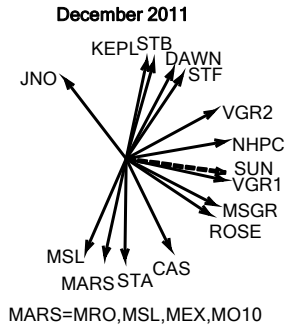
Mars Express Orbital Science; Radio Science Bi-Static in weeks 48 and 52

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Ext ESP; X/Ka-Delta DOR in week 48

Messenger Prime Science; TCM in week 49

Resource Allocation Review
Events, Recommendations and Analyses
2011 – December (Weeks 48 - 52) (continued)



EVENTS

MSL Launch in week 48, Launch support in weeks 49 – 52, Delta DOR in weeks 49 – 52, TCM in week 50, ACS/NAV Cal in week 52

New Horizons Beacon; Cruise Telemetry in week 48, Maneuver in weeks 50 and 51, Solar Conjunction in week 52

SGP Crustal Dynamics H-M5 in week 48 and 50, B-M5 in weeks 49 and 51

SOHO Keyhole begins in week 52

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 2 MAGROL in week 50

Resource Allocation Review
Events, Recommendations and Analyses
2011 – December (Weeks 48 - 52) (continued)

RECOMMENDATIONS

M01O Mapping at 70M MSPA 4 of 7 passes with MRO Ext ESP at 34B1,34B2 and move to 70M.

MEX Orbital Science at 34H MSPA 3 of 7 passes with MRO Ext ESP at 34B1,34B2 and move to 70M.

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 passes with MEX Orbital Science at 34H and move to 70M and MSPA 4 of 7 passes with M01O Mapping at 70M.

MSGR Prime Science Move 2 of 12 passes at DSS-25,34,55 to DSS-34,45 and move remaining passes to DSS-25,55

STA move 1 of 7 passes from DSS-26,34,55 to DSS-34,45 and remaining 6 passes to DSS-25,55.

STB move 1 of 7 passes from DSS-26,34,54 to DSS-34,45 and remaining 6 passes to DSS-25,55.

VGR2 reduce 7 of 7 8-hour passes at DSS-43,45,34 to 4-hours and change to DSS-43,45.

Reactivate DSS-46 for use by, ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC.

Add S-Band Uplink capability to DSS-15 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Add S-Band Uplink and Downlink capability to DSS-55 ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – December (Weeks 48 - 52) (continued)

ANALYSES

(34BWG1, 34BWG2, 34HEF, DSS-27) The projected unsupportable time is moderate to extreme for ACE, DAWN, DSS Maintenance, GRLA, GRLB, INTG, KEPL, MRO, MSGR, MSL, SOHO, STA, STB, STF, THB, THC, VGR2 and WIND. The contention is due to oversubscription of the subnet in support of MRO Ext ESP, MSGR Prime Science and SOHO Keyhole and the dual and near dual continuous coverage of GRLA and GRLB approach and LOI requirements overlapping all other mission viewperiods throughout the month. Additionally THB and THC requirements in the same Moon viewperiod directly contend for the same time as both GRAIL spacecraft.

There are only 5 antennas capable of supporting the GRAIL mission with both X and S-band, DSS-24, DSS-34, DSS-45, DSS-54, DSS-65. These 5 antennas would need to be dedicated to GRAIL at every Moon view. GRLA and B are requesting 28 – 41 passes per week and an additional 7 passes per week are requested by THEMIS. Additional resources are required to support other mission requirements and to provide support during maintenance. It is recommended that additional S-Band or S/X-Band resources be made available for other users as well as for GRAIL and THEMIS.

At Goldstone only one antenna is fully capable of supporting a GRAIL spacecraft. The other GRAIL spacecraft will need two antennas to support it with S or X-Band. This further reduces capacity and increases contention for all other missions. We therefore recommend that an S-Band uplink capability be added to DSS-15 so that it may support in standalone mode.

Resource Allocation Review
Events, Recommendations and Analyses
2011 – December (Weeks 48 - 52) (continued)

ANALYSES

(34BWG1, 34BWG2, 34HEF, DSS-27 Continued)

Canberra capacity does not allow other missions including maintenance to be supported when both GRAIL spacecraft are in continuous or near continuous coverage. We therefore recommend that DSS-46 be reactivated during the GRAIL mission.

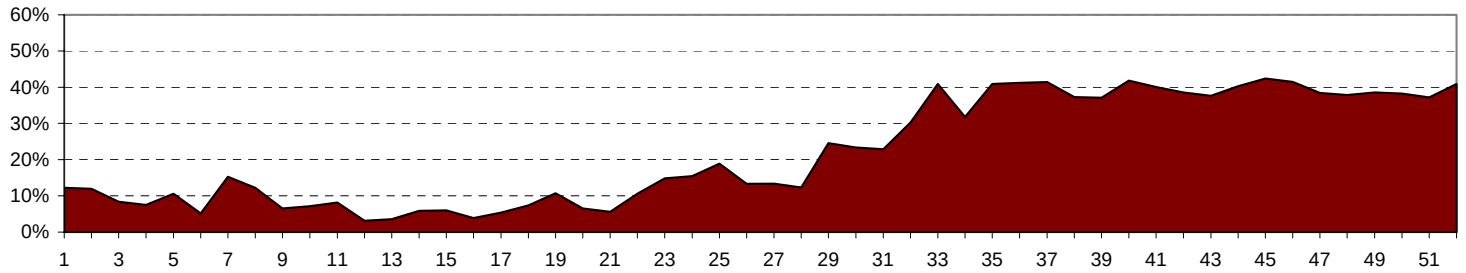
Madrid will support GRAIL and THEMIS with DSS-54 and DSS-65, this will not be sufficient to support all 4 spacecraft as well as maintenance. Attempting to do so will also prevent all other missions from achieving full requirement. We therefore recommend that DSS-55 be upgraded with an S-Band transmitter and receiver.

Failure to provide DSS-15 S-Band uplink upgrade and DSS-46 reactivation as additional resources during GRAIL continuous periods will require a reduction of at least 12 passes from the following missions CAS, M01O, MRO, MSGR, MEX, STA, STB, STF, THB and THC.

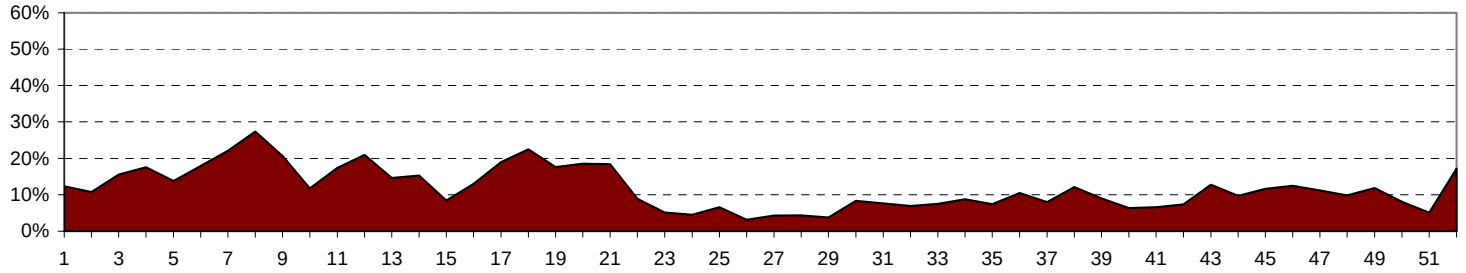
2012 Events, Recommendations and Analyses

Resource Allocation Review
Events, Recommendations and Analyses
2012 Weekly Average User Unsupportable Time

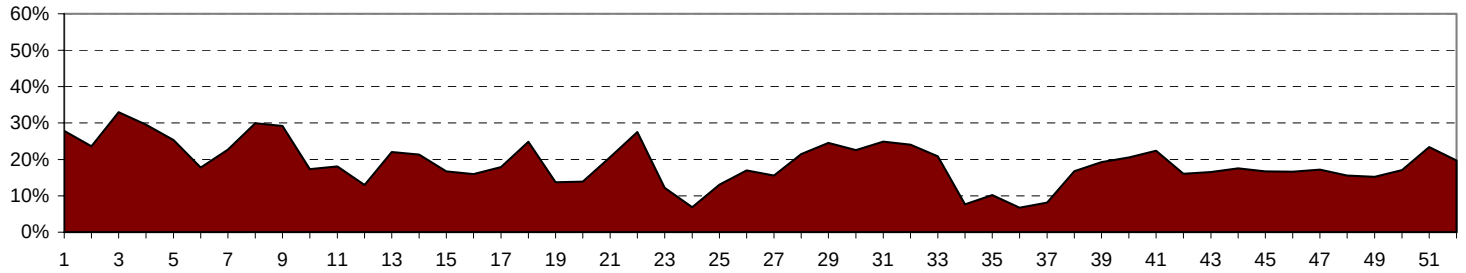
70M



34HEF

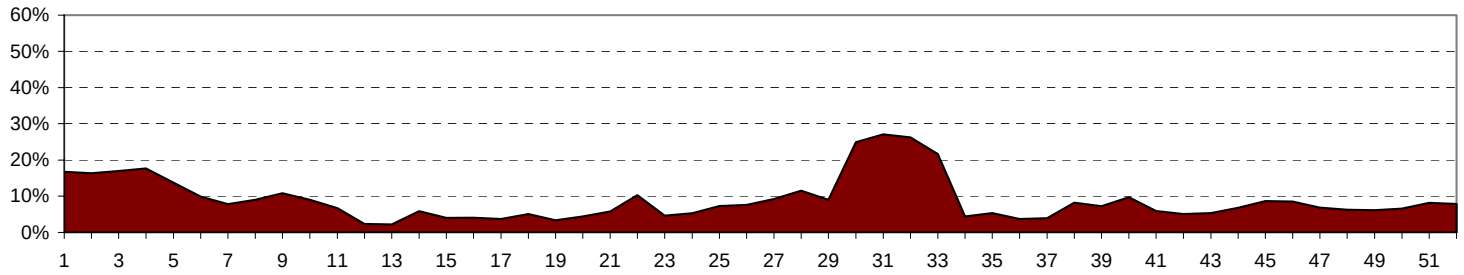


34BWG1

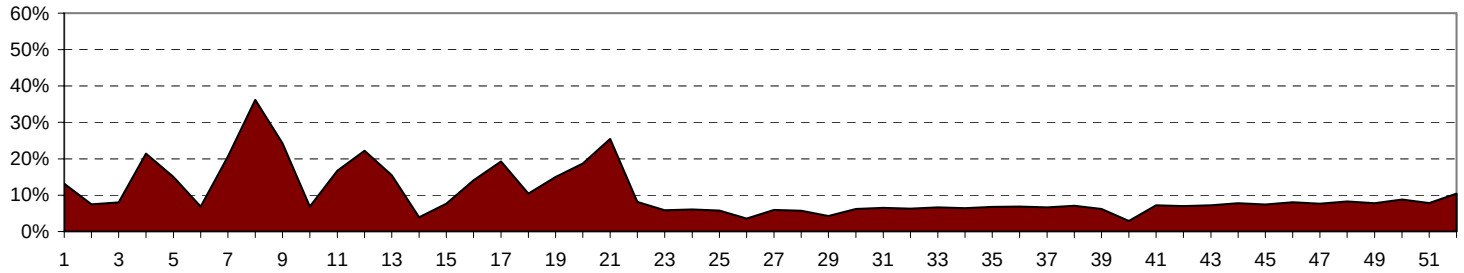


Resource Allocation Review
Events, Recommendations and Analyses
2012 Weekly Average User Unsupportable Time

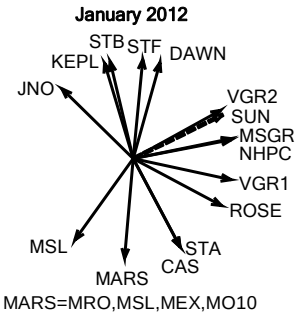
34BWG2



34HSB



Resource Allocation Review
Events, Recommendations and Analyses
2012 – January (Weeks 01 - 04)



EVENTS

Cassini Tour

Chandra ACA Dark Current Measurement in week 02

Dawn Vesta Orbit

GRAIL-A LOI/OPR/TSF

GRAIL-B LOI/OPR/TSF

GSSR Asteroid 1991 VK in weeks 03 and 04, Asteroid Eros in week 04

INTG Redu Maintenance in weeks 02 and 04

JUNO Cruise

Kepler Science Operations

Mars Odyssey Mapping

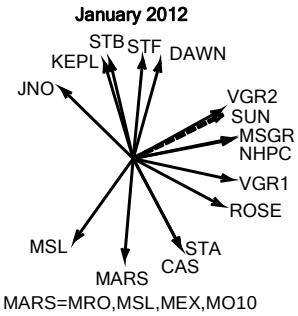
Mars Express Orbital Science; R/S Bi-Static in week 04

Mars Reconnaissance Orbiter Ext ESP

Messenger Prime Science

MSL Cruise; Delta DOR; TCM in week 04

Resource Allocation Review
Events, Recommendations and Analyses
2012 – January (Weeks 01 - 04) (continued)



EVENTS

New Horizons Beacon ends in week 01, Solar Conjunction in week 01, Checkout weeks 01 and 02, Cruise Telemetry in week 03, Beacon resumes in week 03
SGP Crustal Dynamics H-M5 in week 02, B-M5 in weeks 03 and 04

SOHO Keyhole ends in week 04; Keyhole Maneuver in week 3

STEREO Ahead HGA CAL in week 02

STEREO Behind HGA CAL in week 02

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 A082 U/L BU and D/L CONF BU in week 01, Sequence A082 U/L and D/L CONF in week 01

Voyager 2 BLF U/L and D/L in week 04

WIND TCM week 01

Resource Allocation Review
Events, Recommendations and Analyses
2012 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS

M01O Mapping at 70M MSPA 4 of 7 passes with MRO Ext ESP at 34B1,34B2 and move to 70M.

MEX Orbital Science at 34H MSPA 3 of 7 passes with MRO Ext ESP at 34B1,34B2 and move to 70M.

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 passes with MEX Orbital Science at 34H and move to 70M and MSPA 4 of 7 passes with M01O Mapping at 70M.

MSGR Prime Science Move 2 of 12 passes at DSS-25,34,55 to DSS-34,45 and move remaining passes to DSS-25,55

STA move 1 of 7 passes from DSS-26,34,55 to DSS-34,45 and remaining 6 passes to DSS-25,55.

STB move 1 of 7 passes from DSS-26,34,54 to DSS-34,45 and remaining 6 passes to DSS-25,55.

VGR2 reduce 7 of 7 8-hour passes at DSS-43,45,34 to 4-hours and change to DSS-43,45.

Reactivate DSS-46 for use by, ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC.

Add S-Band Uplink capability to DSS-15 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Add S-Band Uplink and Downlink capability to DSS-55 ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – January (Weeks 01 - 04) (continued)

ANALYSES

(34BWG1, 34BWG2, 34HEF, DSS-27) The projected unsupportable time is moderate to extreme for ACE, DAWN, DSS Maintenance, GRLA, GRLB, INTG, KEPL, MRO, MSGR, MSL, SOHO, STA, STB, STF, THB, THC, VGR2 and WIND. The contention is due to oversubscription of the subnet in support of MRO Ext ESP, MSGR Prime Science and SOHO Keyhole and the dual and near dual continuous coverage of GRLA and GRLB approach and LOI requirements overlapping all other mission viewperiods throughout the month. Additionally THB and THC requirements in the same Moon viewperiod directly contend for the same time as both GRAIL spacecraft.

There are only 5 antennas capable of supporting the GRAIL mission with both X and S-band, DSS-24, DSS-34, DSS-45, DSS-54, DSS-65. These 5 antennas would need to be dedicated to GRAIL at every Moon view. GRLA and B are requesting 28 – 41 passes per week and an additional 7 passes per week are requested by THEMIS. Additional resources are required to support other mission requirements and to provide support during maintenance. It is recommended that additional S-Band or S/X-Band resources be made available for other users as well as for GRAIL and THEMIS.

At Goldstone only one antenna is fully capable of supporting a GRAIL spacecraft. The other GRAIL spacecraft will need two antennas to support it with S or X-Band. This further reduces capacity and increases contention for all other missions. We therefore recommend that an S-Band uplink capability be added to DSS-15 so that it may support in standalone mode.

2012 – January (Weeks 01 - 04) (continued)

ANALYSES

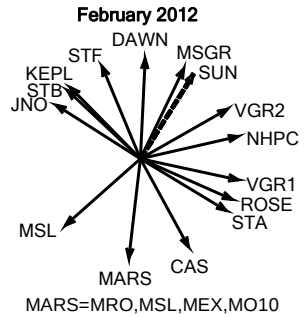
(34BWG1, 34BWG2, 34HEF, DSS-27 Continued)

Canberra capacity does not allow other missions including maintenance to be supported when both GRAIL spacecraft are in continuous or near continuous coverage. We therefore recommend that DSS-46 be reactivated during the GRAIL mission.

Madrid will support GRAIL and THEMIS with DSS-54 and DSS-65, this will not be sufficient to support all 4 spacecraft as well as maintenance. Attempting to do so will also prevent all other missions from achieving full requirement. We therefore recommend that DSS-55 be upgraded with an S-Band transmitter and receiver.

Failure to provide DSS-15 S-Band uplink upgrade and DSS-46 reactivation as additional resources during GRAIL continuous periods will require a reduction of at least 12 passes from the following missions CAS, M01O, MRO, MSGR, MEX, STA, STB, STF, THB and THC.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – February (Weeks 05 - 08)



EVENTS

DSS-43 proposed downtime for Life Extension in weeks 05 – 22

ATOT A01 Astrometry in week 07

Cassini Tour

Dawn Vesta Orbit

EGS Global VLBI in week 06, Calib in week 07, EVN J-M5 in week 07

GRAIL-A LOI/OPR/TSF ends in week 07, Science starts in week 08

GRAIL-B LOI/OPR/TSF ends in week 07, Science starts in week 08

GSSR Asteroid Eros in week 05, Asteroid 2000 ET70 in weeks 07 and 08, Mars begins in weeks 07

INTG Redu Maintenance in week 06

JUNO Cruise

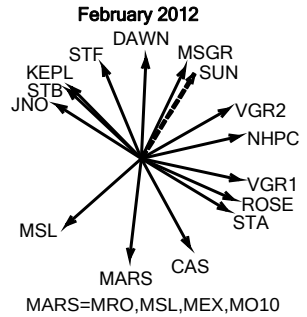
Kepler Science Operations; Monthly Science in week 05

Mars Odyssey Mapping

Mars Express Orbital Science; R/S Bi-Static in weeks 08

Mars Reconnaissance Orbiter Ext ESP; X/Ka-Delta DOR in week 08

Resource Allocation Review
Events, Recommendations and Analyses
2012 – February (Weeks 05 - 08) (continued)



EVENTS

Messenger Prime Science

MSL Cruise, Delta DOR, TCM in week 05

New Horizons Beacon; Cruise Telemetry in week 07

SGP Crustal Dynamics B-M5 in week 06, H-M5 in week 08

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 2 BLF U/L and BLF D/L in week 05, B155 U/L Bu and D/L CONF BU in week 06, Sequence B155 U/L and D/L in week 06

Resource Allocation Review
Events, Recommendations and Analyses
2012 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-43 downtime for Life Extension.

M01O Mapping MSPA 3 of 7 70M passes with MRO Ext ESP at 70M. (1,2)

MRO Ext ESP move 1 pass from 34B1,34B2 to DSS-34,45 and move remaining 6 passes to DSS-15,25. MSPA 3 of 7 70M passes with M01O Mapping at 70M. (1,2)

MSGR Prime Science Move 2 of 12 passes at DSS-25,34,55 to DSS-34,45 and move remaining passes to DSS-25,55. (1)

STA move 1 of 7 passes from DSS-26,34,55 to DSS-34,45 and remaining 6 passes to DSS-25,55. (1)

STB move 1 of 7 passes from DSS-26,34,54 to DSS-34,45 and remaining 6 passes to DSS-25,55. (1)

☺ SOHO move two 1.6-hour passes from DSS-27,45,65 to DSS-34,45 and remaining 12 to DSS-27,65 and move one 9.6-hour passes from DSS-27,45,65 to DSS-34,45 and remaining 6 to DSS-27,65. (1)

VGR2 reduce passes at DSS-43,45,34 from 8 to 4 hours and move to DSS-34,45. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS

Reactivate DSS-46 for use by, ACE, CHDR, GRLA, GRLB, SOHO, THB, THC.

Add S-Band Uplink capability to DSS-15 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Add S-Band Uplink and Downlink capability to DSS-55 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – February (Weeks 05 - 08) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate for DSS Maintenance, M01O Mapping, MRO and MSL. The contention is due to oversubscription of the subnet in the Mars view compounded by the DSS-43 downtime.

2. (34BWG1, 34BWG2, 34HEF, DSS-27) The projected unsupportable time is moderate to extreme for ACE, DAWN, DSS Maintenance, GRLA, GRLB, INTG, KEPL, MRO, MSGR, MSL, SOHO, STA, STB, STF, THB, THC, VGR2 and WIND. The contention is due to oversubscription of the subnet in support of MRO Ext ESP, MSGR Prime Science and SOHO Keyhole and the dual and near dual continuous coverage of GRLA and GRLB approach and LOI requirements overlapping all other mission viewperiods throughout the month. Additionally THB and THC requirements in the same Moon viewperiod directly contend for the same time as both GRAIL spacecraft.

There are only 5 antennas capable of supporting the GRAIL mission with both X and S-band, DSS-24, DSS-34, DSS-45, DSS-54, DSS-65. These 5 antennas would need to be dedicated to GRAIL at every Moon view. GRLA and B are requesting 28 – 41 passes per week and an additional 7 passes per week are requested by THEMIS. Additional resources to support other mission requirements and to provide support during maintenance. It is recommended that additional S-Band or S/X-Band resources be made available for other users as well as for GRAIL and THEMIS.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – February (Weeks 05 - 08) (continued)

ANALYSES

2. (34BWG1, 34BWG2, 34HEF, DSS-27 Continued)

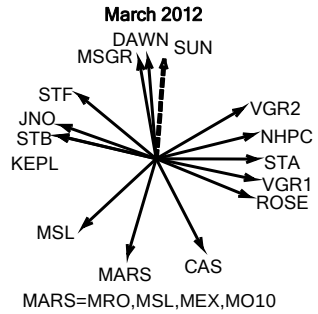
At Goldstone only one antenna is fully capable of supporting a GRAIL spacecraft. The other GRAIL spacecraft will need two antennas to support it with S or X-Band. This further reduces capacity and increases contention for all other missions. We therefore recommend that an S-Band uplink capability be added to DSS-15 so that it may support in standalone mode.

Canberra capacity does not allow other missions including maintenance to be supported when both GRAIL spacecraft are in continuous or near continuous coverage. We therefore recommend that DSS-46 be reactivated during the GRAIL mission.

Madrid will support GRAIL and THEMIS with DSS-54 and DSS-65, this will not be sufficient to support all 4 spacecraft as well as maintenance. Attempting to do so will also prevent all other missions from achieving full requirement. We therefore recommend that DSS-55 be upgraded with an S-Band transmitter and receiver.

Failure to provide DSS-15 S-Band uplink upgrade and DSS-46 reactivation as additional resources during GRAIL continuous periods will require a reduction of at least 12 passes from the following missions CAS, M01O, MRO, MSGR, MEX, STA, STB, STF, THB and THC.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – March (Weeks 09 - 13)



EVENTS

DSS-43 proposed downtime for Life Extension
DSS-25 proposed downtime for AZ Track Replacement in weeks 09 – 18

Cassini Tour

Chandra Earth Eclipse begins in week 13

Dawn Vesta Orbit; Delta DOR in week 12

GRAIL-A Science

GRAIL-B Science

GSSR Mars ends in weeks 11

INTG Redu Maintenance in weeks 09, 11, and 13

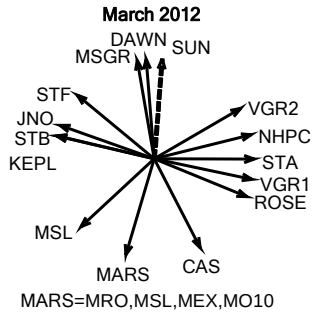
JUNO Cruise; DSMs Delta DOR in week 13

Kepler Science Operations; Monthly Science in week 09

Mars Odyssey Mapping

Mars Express Orbital Science; R/S Bi-Static in weeks 12

Resource Allocation Review
Events, Recommendations and Analyses
2012 – March (Weeks 09 - 13) (continued)



EVENTS

Mars Reconnaissance Orbiter Ext ESP

Messenger Prime Science ends in week 11

MSL Cruise, Delta DOR

New Horizons Beacon; Cruise Telemetry in week 11

SGP Crustal Dynamics B-M5 in weeks 10 and 12, H-M5 in week 13

SOHO Keyhole begins in week 13

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Resource Allocation Review
Events, Recommendations and Analyses
2012 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS

DSS approve DSS-25 proposed downtime for AZ Track Replacement
DSS approve DSS-43 proposed downtime for Life Extension

M01O Mapping MSPA 3 of 7 70M passes with MRO Ext ESP at 70M. (1,2)

MRO Ext ESP move 1 pass from 34B1,34B2 to DSS-34,45 and move remaining 6 passes to DSS-15,24. MSPA 3 of 7 70M passes with M01O Mapping at 70M. (1,2)

MSGR Prime Science Move 2 of 12 passes at DSS-25,34,55 to DSS-34,45 and move remaining passes to DSS-24,55. (1)

STA move 1 of 7 passes from DSS-26,34,55 to DSS-34,45 and remaining 6 passes to DSS-24,55. (1)

STB move 1 of 7 passes from DSS-26,34,54 to DSS-34,45 and remaining 6 passes to DSS-24,55. (1)

☺ SOHO move two 1.6-hour passes from DSS-27,45,65 to DSS-34,45 and remaining 12 to DSS-27,65 and move one 9.6-hour passes from DSS-27,45,65 to DSS-34,45 and remaining 6 to DSS-27,65. (1)

VGR2 reduce passes at DSS-43,45,34 from 8 to 4 hours and move to DSS-34,45. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – March (Weeks 09 - 13) (continued)

RECOMMENDATIONS

Reactivate DSS-46 for use by, ACE, CHDR, GRLA, GRLB, SOHO, THB, THC.

Add S-Band Uplink capability to DSS-15 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Add S-Band Uplink and Downlink capability to DSS-55 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – March (Weeks 09 - 13) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate for DSS Maintenance, M01O Mapping, MRO and MSL. The contention is due to oversubscription of the subnet in the Mars view compounded by the DSS-43 downtime.**

2. **(34BWG1, 34BWG2, 34HEF, DSS-27) The projected unsupportable time is moderate to extreme for ACE, DAWN, DSS Maintenance, GRLA, GRLB, INTG, KEPL, MRO, MSGR, MSL, SOHO, STA, STB, STF, THB, THC, VGR2 and WIND. The contention is due to oversubscription of the subnet in support of MRO Ext ESP, MSGR Prime Science and SOHO Keyhole and the dual and near dual continuous coverage of GRLA and GRLB approach and LOI requirements overlapping all other mission viewperiods throughout the month. Additionally THB and THC requirements in the same Moon viewperiod directly contend for the same time as both GRAIL spacecraft.**

There are only 5 antennas capable of supporting the GRAIL mission with both X and S-band, DSS-24, DSS-34, DSS-45, DSS-54, DSS-65. These 5 antennas would need to be dedicated to GRAIL at every Moon view. GRLA and B are requesting 28 – 41 passes per week and an additional 7 passes per week are requested by THEMIS. Additional resources to support other mission requirements and to provide support during maintenance. It is recommended that additional S-Band or S/X-Band resources be made available for other users as well as for GRAIL and THEMIS.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – March (Weeks 09 - 13) (continued)

ANALYSES

2. (34BWG1, 34BWG2, 34HEF, DSS-27 Continued)

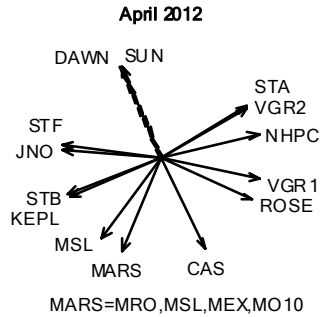
At Goldstone only one antenna is fully capable of supporting a GRAIL spacecraft. The other GRAIL spacecraft will need two antennas to support it with S or X-Band. This further reduces capacity and increases contention for all other missions. We therefore recommend that an S-Band uplink capability be added to DSS-15 so that it may support in standalone mode.

Canberra capacity does not allow other missions including maintenance to be supported when both GRAIL spacecraft are in continuous or near continuous coverage. We therefore recommend that DSS-46 be reactivated during the GRAIL mission.

Madrid will support GRAIL and THEMIS with DSS-54 and DSS-65, this will not be sufficient to support all 4 spacecraft as well as maintenance. Attempting to do so will also prevent all other missions from achieving full requirement. We therefore recommend that DSS-55 be upgraded with an S-Band transmitter and receiver.

Failure to provide DSS-15 S-Band uplink upgrade and DSS-46 reactivation as additional resources during GRAIL continuous periods will require a reduction of at least 12 passes from the following missions CAS, M01O, MRO, MSGR, MEX, STA, STB, STF, THB and THC.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – April (Weeks 14 - 17)



EVENTS

DSS-43 proposed downtime for Life Extension
DSS-25 proposed downtime for AZ Track Replacement

Cassini Tour

Chandra Earth Eclipse, ACA Dark Current Measurement in week 15

Dawn Vista Orbit ends in week 14, Vesta Depart begins in week 15, Delta DOR in weeks 14 and 16

GRAIL-A Science

GRAIL-B Science

GSSR GDOR in week 15

INTG Redu Maintenance in weeks 15 and 17

Kepler Science Operations; Quart Roll and Science in week 14

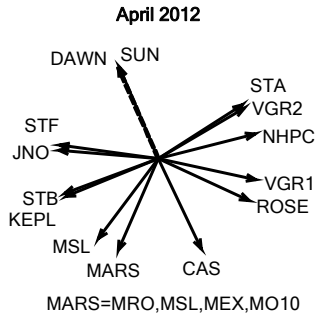
Mars Express Orbital Science; R/S Bi-Static in week 16

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Ext ESP; X/Ka-Delta DOR in week 16

MSL Cruise; Delta DOR; FS C/O 2 in week 17

Resource Allocation Review
Events, Recommendations and Analyses
2012 – April (Weeks 14 - 17) (continued)



EVENTS

New Horizons Beacon; Cruise Telemetry in weeks 15 and 17

SGP Crustal Dynamics B-M5 in weeks 14 and 15, H-M5 in week 16

SOHO Keyhole ends in week 16, Keyhole Maneuver in week 15

STEREO Ahead HGA CAL in week 14

STEREO Behind HGA CAL in week 14

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 A083 U/L BU and D/L CONF BU in week 14, Sequence A083 U/L and SEQ D/L CONF in week 14

Voyager 2 BLF U/L and D/L in week 17

WIND TCM in week 14

Resource Allocation Review
Events, Recommendations and Analyses
2012 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

DSS approve DSS-25 proposed downtime for AZ Track Replacement
DSS approve DSS-43 proposed downtime for Life Extension

M01O Mapping MSPA 3 of 7 70M passes with MRO Ext ESP at 70M. (1,2)

MRO Ext ESP move 1 pass from 34B1,34B2 to DSS-34,45 and move remaining 6 passes to DSS-15,24. MSPA 3 of 7 70M passes with M01O Mapping at 70M. (1,2)

MSGR Prime Science Move 2 of 12 passes at DSS-25,34,55 to DSS-34,45 and move remaining passes to DSS-24,55. (1)

STA move 1 of 7 passes from DSS-26,34,55 to DSS-34,45 and remaining 6 passes to DSS-24,55. (1)

STB move 1 of 7 passes from DSS-26,34,54 to DSS-34,45 and remaining 6 passes to DSS-24,55. (1)

☺ SOHO move two 1.6-hour passes from DSS-27,45,65 to DSS-34,45 and remaining 12 to DSS-27,65 and move one 9.6-hour passes from DSS-27,45,65 to DSS-34,45 and remaining 6 to DSS-27,65. (1)

VGR2 reduce passes at DSS-43,45,34 from 8 to 4 hours and move to DSS-34,45. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

Reactivate DSS-46 for use by, ACE, CHDR, GRLA, GRLB, SOHO, THB, THC.

Add S-Band Uplink capability to DSS-15 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Add S-Band Uplink and Downlink capability to DSS-55 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – April (Weeks 14 - 17) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate for DSS Maintenance, M01O Mapping, MRO and MSL. The contention is due to oversubscription of the subnet in the Mars view compounded by the DSS-43 downtime.

2. (34BWG1, 34BWG2, 34HEF, DSS-27) The projected unsupportable time is moderate to extreme for ACE, DAWN, DSS Maintenance, GRLA, GRLB, INTG, KEPL, MRO, MSGR, MSL, SOHO, STA, STB, STF, THB, THC, VGR2 and WIND. The contention is due to oversubscription of the subnet in support of MRO Ext ESP, MSGR Prime Science and SOHO Keyhole and the dual and near dual continuous coverage of GRLA and GRLB approach and LOI requirements overlapping all other mission viewperiods throughout the month. Additionally THB and THC requirements in the same Moon viewperiod directly contend for the same time as both GRAIL spacecraft.

There are only 5 antennas capable of supporting the GRAIL mission with both X and S-band, DSS-24, DSS-34, DSS-45, DSS-54, DSS-65. These 5 antennas would need to be dedicated to GRAIL at every Moon view. GRLA and B are requesting 28 – 41 passes per week and an additional 7 passes per week are requested by THEMIS. Additional resources to support other mission requirements and to provide support during maintenance. It is recommended that additional S-Band or S/X-Band resources be made available for other users as well as for GRAIL and THEMIS.

ANALYSES

2. (34BWG1, 34BWG2, 34HEF, DSS-27 Continued)

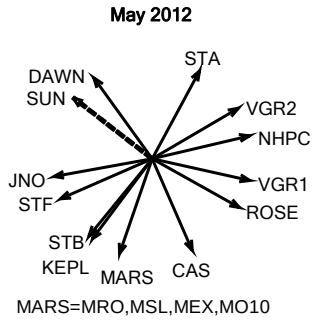
At Goldstone only one antenna is fully capable of supporting a GRAIL spacecraft. The other GRAIL spacecraft will need two antennas to support it with S or X-Band. This further reduces capacity and increases contention for all other missions. We therefore recommend that an S-Band uplink capability be added to DSS-15 so that it may support in standalone mode.

Canberra capacity does not allow other missions including maintenance to be supported when both GRAIL spacecraft are in continuous or near continuous coverage. We therefore recommend that DSS-46 be reactivated during the GRAIL mission.

Madrid will support GRAIL and THEMIS with DSS-54 and DSS-65, this will not be sufficient to support all 4 spacecraft as well as maintenance. Attempting to do so will also prevent all other missions from achieving full requirement. We therefore recommend that DSS-55 be upgraded with an S-Band transmitter and receiver.

Failure to provide DSS-15 S-Band uplink upgrade and DSS-46 reactivation as additional resources during GRAIL continuous periods will require a reduction of at least 12 passes from the following missions CAS, M01O, MRO, MSGR, MEX, STA, STB, STF, THB and THC.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – May (Weeks 18 - 22)



EVENTS

DSS-43 proposed downtime for Life Extension ends in week 22
DSS-25 proposed downtime for AZ Track Replacement ends in week 18

ATOT A01 Image in week 18

Cassini Tour

Chandra Earth Eclipse ends in week 19

Dawn Vesta Depart; Delta DOR in weeks 18, 20 and 22

EGS Global VLBI in week 22

GRAIL-A Science

GRAIL-B Science

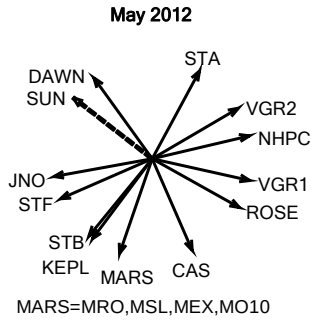
GSSR Asteroid 1998 HE3 in week 19

INTG Redu Maintenance in weeks 19 and 21

JUNO Cruise

Kepler Science Operations; Monthly Science in weeks 18 and 22

Resource Allocation Review
Events, Recommendations and Analyses
2012 – May (Weeks 18 - 22) (continued)



EVENTS

Mars Express Orbital Science; R/S Bi-Static in week 20

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Ext ESP

MSL Cruise; Delta DOR; MSL FS C/O 2 ends in week 19, FSW Update begins in week 21

New Horizons Checkout; Beacon ends in week 18, Array test in week 20, Delta DOR in weeks 18 and 19, L MET CCD CMD in week 20, Maneuver in week 22

SGP Crustal Dynamics B-M5 in weeks 18, 20, and 21, H-M5 in week 19

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 2 BLF U/L and BLF D/L in week 18, B155 U/L BU and D/L Conf BU in week 19, Sequence B156 U/L and D/L CONF BU in week 19

Resource Allocation Review
Events, Recommendations and Analyses
2012 – May (Weeks 18 - 22) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-25 downtime for Azimuth Track Replacement ending in week 18

DSS approve proposed DSS-43 downtime for Life Extension

M01O Mapping MSPA 3 of 7 70M passes with MRO Ext ESP at 70M. (1,2)

MRO Ext ESP move 1 pass from 34B1,34B2 to DSS-34,45 and move remaining 6 passes to DSS-15,24. MSPA 3 of 7 70M passes with M01O Mapping at 70M. (1,2)

MSGR Prime Science Move 2 of 12 passes at DSS-25,34,55 to DSS-34,45 and move remaining passes to DSS-24,55. (1)

STA move 1 of 7 passes from DSS-26,34,55 to DSS-34,45 and remaining 6 passes to DSS-24,55. (1)

STB move 1 of 7 passes from DSS-26,34,54 to DSS-34,45 and remaining 6 passes to DSS-24,55. (1)

☺ SOHO move two 1.6-hour passes from DSS-27,45,65 to DSS-34,45 and remaining 12 to DSS-27,65 and move one 9.6-hour passes from DSS-27,45,65 to DSS-34,45 and remaining 6 to DSS-27,65. (1)

VGR2 reduce passes at DSS-43,45,34 from 8 to 4 hours and move to DSS-34,45. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – May (Weeks 18 - 22) (continued)

RECOMMENDATIONS

Reactivate DSS-46 for use by, ACE, CHDR, GRLA, GRLB, SOHO, THB, THC.

Add S-Band Uplink capability to DSS-15 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Add S-Band Uplink and Downlink capability to DSS-55 for use by ACE, CHDR, GRLA, GRLB, INTG, SOHO, THB, THC, WIND.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – May (Weeks 18 - 22) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate for DSS Maintenance, M01O Mapping, MRO and MSL. The contention is due to oversubscription of the subnet in the Mars view compounded by the DSS-43 downtime.**

(34BWG1, 34BWG2, 34HEF, DSS-27) The projected unsupportable time is moderate to extreme for ACE, DAWN, DSS Maintenance, GRLA, GRLB, INTG, KEPL, MRO, MSGR, MSL, SOHO, STA, STB, STF, THB, THC, VGR2 and WIND. The contention is due to oversubscription of the subnet in support of MRO Ext ESP, MSGR Prime Science and SOHO Keyhole and the dual and near dual continuous coverage of GRLA and GRLB approach and LOI requirements overlapping all other mission viewperiods throughout the month. Additionally THB and THC requirements in the same Moon viewperiod directly contend for the same time as both GRAIL spacecraft.

There are only 5 antennas capable of supporting the GRAIL mission with both X and S-band, DSS-24, DSS-34, DSS-45, DSS-54, DSS-65. These 5 antennas would need to be dedicated to GRAIL at every Moon view. GRLA and B are requesting 28 – 41 passes per week and an additional 7 passes per week are requested by THEMIS. Additional resources to support other mission requirements and to provide support during maintenance. It is recommended that additional S-Band or S/X-Band resources be made available for other users as well as for GRAIL and THEMIS.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – May (Weeks 18 - 22) (continued)

ANALYSES

2. (34BWG1, 34BWG2, 34HEF, DSS-27 Continued)

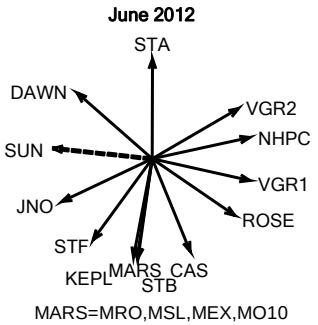
At Goldstone only one antenna is fully capable of supporting a GRAIL spacecraft. The other GRAIL spacecraft will need two antennas to support it with S or X-Band. This further reduces capacity and increases contention for all other missions. We therefore recommend that an S-Band uplink capability be added to DSS-15 so that it may support in standalone mode.

Canberra capacity does not allow other missions including maintenance to be supported when both GRAIL spacecraft are in continuous or near continuous coverage. We therefore recommend that DSS-46 be reactivated during the GRAIL mission.

Madrid will support GRAIL and THEMIS with DSS-54 and DSS-65, this will not be sufficient to support all 4 spacecraft as well as maintenance. Attempting to do so will also prevent all other missions from achieving full requirement. We therefore recommend that DSS-55 be upgraded with an S-Band transmitter and receiver.

Failure to provide DSS-15 S-Band uplink upgrade and DSS-46 reactivation as additional resources during GRAIL continuous periods will require a reduction of at least 12 passes from the following missions CAS, M01O, MRO, MSGR, MEX, STA, STB, STF, THB and THC.

Resource Allocation Review
Events, Recommendations and Analyses
2012 – June (Weeks 23 - 26)



EVENTS

ATOT Mission in week 25

Cassini Tour

Dawn Vesta Depart ends in week 23, Delta DOR in weeks 24 and 26, Dawn Ceres Thrust PB and TV begin in week 24

EGS EVN J-M5 in week 23

GRAIL-A Science ends in week 23

GRAIL-B Science ends in week 23

GSSR Asteroid 2005 G021 in weeks 24 – 26

INTG Redu Maintenance in weeks 24 and 26

JUNO Cruise; DSMs Delta DOR in week 26

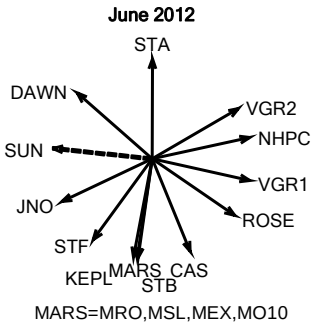
Kepler Science Operations; Quarterly Roll and Science in week 26

Mars Express Orbital Science; R/S Bi-Static in week 24

Mars Odyssey Mapping

Mars Reconnaissance Orbiter Ext ESP; X/Ka-Delta DOR in weeks 24 and 26

Resource Allocation Review
Events, Recommendations and Analyses
2012 – June (Weeks 23 - 26) (continued)



EVENTS

MSL Cruise; Delta DOR; FSW Update ends in week 23, INST C/O 2 in weeks 24 and 25, TCM in weeks 25 and 26

New Horizons Checkout; Delta DOR in weeks 23 – 25, L MET CCD CMD in week 24, Array Test in week 24

SGP Crustal Dynamics H-M4 in week 23, B-M5 in weeks 25 and 26

SOHO Keyhole begins in week 25

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

RECOMMENDATIONS

MEX Orbital Science MSPA 3 of 7 8-hour passes at 34H with MRO Ext ESP.

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 8-hour passes with MEX Orbital Science at 34H and move remaining 4 passes to 34B2.

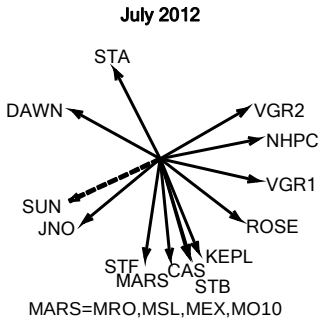
Resource Allocation Review
Events, Recommendations and Analyses
2012 – June (Weeks 23 - 26) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, MRO, STF, THEMIS-B, THEMIS-C and VGR2. Contention is due to oversubscription of the subnet.**

Contention levels on the 70M, 34HEF, 34BWG2, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2012 – July (Weeks 27 - 30)



EVENTS

Cassini Tour

Chandra ACA Dark Current Measurement in week 28

Dawn Ceres Thrust PB and TV; Delta DOR in weeks 28 and 30

GSSR Asteroid 2002 AM31 in weeks 29 and 30

INTG Redu Maintenance in weeks 28 and 30

JUNO Cruise

Kepler Science Operations

Mars Odyssey Mapping; MSL Relay begins in week 29

Mars Express Orbital Science; R/S Bi-Static in week 28

Mars Reconnaissance Orbiter Ext ESP; X/Ka-Delta DOR

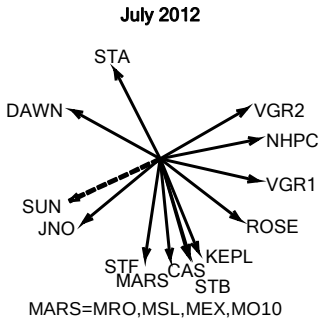
MSL Delta DOR; Cruise ends in week 27, Approach begins in week 27

New Horizons Beacon begins in week 27; Cruise Telemetry in week 27

SGP Crustal Dynamics H-M5 in week 28, B-M5 in week 30

SOHO Keyhole ends in week 29, Keyhole Maneuver in week 28

Resource Allocation Review
Events, Recommendations and Analyses
2012 – July (Weeks 27 - 30) (continued)



EVENTS

STEREO Ahead HGA Cal in week 28

STEREO Behind HGA Cal in week 28

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 1 A084 U/L BU and D/L CONF BU in week 27, SEQ A084 U/L and D/L CONF in 27

Voyager 2 BLF U/L and BLF D/L in week 30

WIND TCM in week 27

Resource Allocation Review
Events, Recommendations and Analyses
2012 – July (Weeks 27 - 30) (continued)

RECOMMENDATIONS

☺ **ACE move 3.5 hour passes from DSS-27,65,34B1 to DSS-27,65 and 1-hour passes from DSS-34,45 to DSS-45.**

M01O Mapping MSPA 4 of 7 10-hour passes at 70M with 34B1,34B2 MRO Ext ESP.

MEX Orbital Science MSPA 3 of 7 8-hour passes at 34H with MRO Ext ESP.

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 8-hour passes with MEX Orbital Science at 34H and MSPA remaining 4 passes with M01O Mapping at 70M.

VGR2 reduce from 8-hours to 4-hours and change from DSS-43,45,34 to DSS-43,45

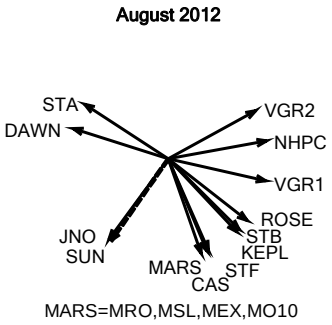
Resource Allocation Review
Events, Recommendations and Analyses
2012 – July (Weeks 27 - 30) (continued)

ANALYSES

1. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, KEPL, MRO, STF, THEMIS-B, THEMIS-C and VGR2. Contention is due to oversubscription of the subnet and multiple spacecraft with high requirements in the same subnet. Contention is due to oversubscription of the subnet, Continuous 34 meter coverage is being requested by MSL Approach and 7 passes for MRO and MEX each are also being requested. The 34 Meter antennas are unable to support full coverage of the Mars viewperiod at 5 antennas and still support DSS maintenance and other DSN users in the overlapping viewperiod with Mars, particularly at Canberra where assets are limited. Offloading to other 34HEF or 34 BWG2 subnets that are already at or over capacity will cause Moderate and Severe contention to rise to Extreme levels.**

Contention levels on the 70M, 34HEF, 34BWG2, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2012 – August (Weeks 31 - 35)



EVENTS

DSS-26 proposed downtime for AZ Track Replacement in weeks 35 – 44

ATOT A01 Image in week 34

Cassini Tour

Chandra Earth Eclipse begins in week 32

Dawn Ceres Thrust PB and TV; Delta DOR in weeks 32 and 34

INTG Redu Maintenance in weeks 32 and 34

JUNO Cruise

Kepler Science Operations; Monthly Science in weeks 31 and 35

Mars Express Orbital Science; R/S Bi-Static in weeks 32

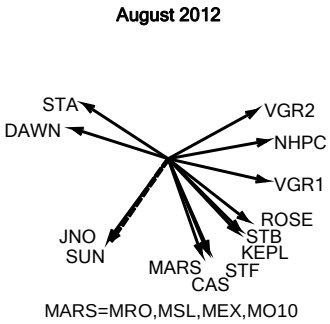
Mars Odyssey Mapping and MSL Relay

Mars Reconnaissance Orbiter Ext ESP; X/Ka-Delta DOR in weeks 31 – 34, MSL Relay begins in week 35

MSL Approach ends in week 33, Delta DOR in weeks 31 – 34, EDL in week 33, TCM in week 33, Surface Ops begins in week 33

New Horizons Beacon; Cruise Telemetry in weeks 31 and 35

Resource Allocation Review
Events, Recommendations and Analyses
2012 – August (Weeks 31 - 35) (continued)



EVENTS

SGP Crust Dynamics B-M5 in weeks 31 and 34, H-M5 in week 35

THEMIS-B Lunar Science Phase

THEMIS-C Lunar Science Phase

Voyager 2 BLF U/L and D/L in week 31, B157 U/L BU and D/L CONF BU in week 32, SEQ B157 U/L and D/L CONF in week 32

Resource Allocation Review
Events, Recommendations and Analyses
2012 – August (Weeks 31 - 35) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-26 downtime for Azimuth Track Replacement beginning in week 35

M01O Mapping MSPA 7 of 7 10-hour passes at 70M with 70M MRO Ext ESP and reduce to 8 hours. (1)

MEX Orbital Science at 34H MSPA 7 of 7 8-hour passes with 34B1,34B2 MRO Ext ESP in weeks 31 – 33 and 3 of 7 passes in weeks 34 and 35. (2,3)

MRO Ext ESP at 34B1,34B2 MSPA 7 of 7 8-hour passes with MEX Orbital Science at 34H in weeks 31 – 33 and 3 of 7 passes in weeks 34 and 35. MRO Ext ESP 70M, MSPA 7 of 7 passes with M01O Mapping at 70M. (1,2,3)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – August (Weeks 31 - 35) (continued)

ANALYSES

1. (70M) The projected unsupportable time is moderate to severe for CAS, DSS Maintenance, M01O, MRO, STF and VGR2. Contention is due to oversubscription of the subnet during MSL Mars Approach and Landing and requests for MSL Relay support from other M01O and MRO missions, as well as MRO and M01O. Requested time is nearly double the 70 meter capacity and leaves no time to support missions with overlapping viewperiods. Reduction or full MSPA of non-MSL relay support by other missions and gaps in MSL continuous coverage are necessary to relieve the contention and allow support for DSS Maintenance and missions like STF. Continuous Mars relay coverage and direct to Earth coverage will require supplementing support from the already oversubscribed 34 meter subnets.

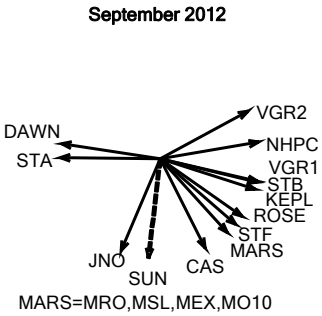
2. (34BWG1) The projected unsupportable time is moderate to extreme for ACE, CAS, DSS Maintenance, KEPL, MRO, MSL, STA, STF, THEMIS-B, THEMIS-C and VGR2. Contention is due to oversubscription of the subnet, Continuous 34 meter coverage is being requested by MSL Approach and 7 passes for MRO and MEX each are also being requested. The 34 Meter antennas are unable to support full coverage of the Mars viewperiod at 5 antennas as well as support all other DSN users in the overlapping viewperiod with Mars, particularly at Canberra where assets are limited. Offloading to the 34HEF or 34BWG2 subnets that are already at or over capacity will cause Moderate and Severe contention to rise to Extreme levels.

ANALYSES

3. (34BWG2) The projected unsupportable time is moderate to severe for CAS, DSS Maintenance, KEPL, MRO, MSL, STA, and VGR1. Contention is due to oversubscription of the subnet.

Contention levels on the 70M, 34HEF, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2012 – September (Weeks 36 - 39)



EVENTS

DSS-26 proposed downtime for AZ Track Replacement

ATOT A01 Astrometry in week 37

Cassini Tour

Chandra Earth Eclipse

Dawn Ceres Thrust PB and TV; Delta DOR in weeks 36 and 38

INTG Redu Maintenance in weeks 37 and 39

JUNO Cruise ends in week 37, DSMs Delta DOR and TCM begin in week 37, DSMs in week 39

Kepler Monthly Science in week 35, Quart Roll and Science in week 38

Mars Express Orbital Science; R/S Bi-Static in week 36

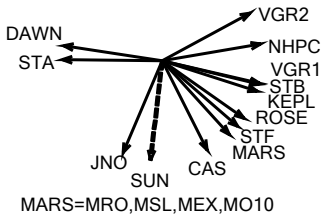
Mars Odyssey Mapping and MSL Relay

Mars Reconnaissance Orbiter Extended Science Phase and MSL Relay

MSL Surface Operations

Resource Allocation Review
Events, Recommendations and Analyses
2012 – September (Weeks 36 - 39) (continued)

September 2012



MARS=MRO,MSL,MEX,MO10

EVENTS

New Horizons Beacon; Cruise Telemetry in week 39

SGP Crustal Dynamics B-M5 in week 36, 38, and 39

SOHO Keyhole begins in week 39

THEMIS-B Lunar Science Phase ends in week 39

THEMIS-C Lunar Science Phase ends in week 39

Resource Allocation Review
Events, Recommendations and Analyses
2012 – September (Weeks 36 - 39) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-26 downtime for Azimuth Track Replacement

M01O Mapping MSPA 7 of 7 10-hour passes at 70M with 70M MRO Ext ESP and reduce to 8 hours. (1)

MEX Orbital Science at 34H MSPA 3 of 7 8-hour passes with 34B1,34B2 MRO Ext ESP at the 34H. (2)

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 8-hour passes with MEX Orbital Science at 34H. MRO Ext ESP 70M, MSPA 7 of 7 passes with M01O Mapping at 70M. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – September (Weeks 36 - 39) (continued)

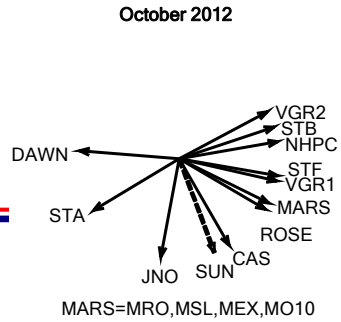
ANALYSES

1. **(70M) The projected unsupportable time is moderate to severe for CAS, DSS Maintenance, M01O, MRO, STF and VGR2. Contention is due to oversubscription of the subnet during MSL Mars Approach and Landing and requests for MSL Relay support from other M01O and MRO missions, as well as MRO and M01O. Requested time is nearly double the 70 meter capacity and leaves no time to support missions with overlapping viewperiods. Reduction or full MSPA of non-MSL relay support by other missions and gaps in MSL continuous coverage are necessary to relieve the contention and allow support for DSS Maintenance and missions like STF. Continuous Mars relay coverage and direct to Earth coverage will require supplementing support from the already oversubscribed 34 meter subnets.**

2. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, CAS, DSS Maintenance, KEPL, MRO, MSL, STA, STF, THEMIS-B, THEMIS-C and VGR2. Contention is due to oversubscription of the subnet. Contention is due to oversubscription of the subnet in the Mars view. The 34 Meter antennas are unable to fully support all requested for MRO, MEX and MSL as well as all other DSN users, particularly at Canberra where assets are limited.**

Contention levels on the 34HEF, 34BWG2, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2012 – October (Weeks 40 - 43)



EVENTS

DSS-26 proposed downtime for AZ Track Replacement

Cassini Tour

Chandra Earth Eclipse ends in week 41, ACA Dark Current Measurement in week 41

Dawn Ceres Thrust PB and TV; Delta DOR in weeks 40 and 42

EGS Calib, EVN J-M5 in week 43

GSSR Asteroid 1998 ST49 in week 42

INTG Redu Maintenance in weeks 41 and 43

JUNO DSMs Delta DOR and TCMs end in week 41, Cruise begins in week 42

Mars Express Orbital Science; R/S Bi-Static in weeks 41, 43

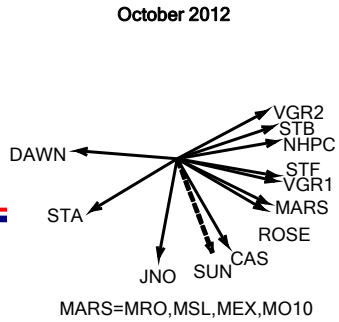
Mars Odyssey Mapping and MSL Relay

Mars Reconnaissance Orbiter Extended Science Phase and MSL Relay; X/Ka-Delta DOR in week 40

MSL Surface Ops

New Horizons Beacon; Cruise Telemetry in week 42

Resource Allocation Review
Events, Recommendations and Analyses
2012 – October (Weeks 40 - 43) (continued)



EVENTS

SGP Crust Dynamics H-M5 in week 43

SOHO Keyhole ends in week 42, Keyhole Maneuver in week 41

SOHO Keyhole 40 – 42, Maneuver in week 41

STEREO Ahead HGA CAL in week 40

STEREO Behind HGA CAL in week 40

THEMIS-B MTI begins in week 40

THEMIS-C MTI begins in week 40

Voyager 1 A085 U/L BU and D/L CONF BU in week 40, SEQ A085 U/L and D/L CONF in week 40

Voyager 2 BLF U/L and BLF D/L in week 43

WIND TCM in week 40

Resource Allocation Review
Events, Recommendations and Analyses
2012 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-26 downtime for Azimuth Track Replacement

M01O Mapping MSPA 7 of 7 10-hour passes at 70M with 70M MRO Ext ESP and reduce to 8 hours. (1)

MEX Orbital Science at 34H MSPA 3 of 7 8-hour passes with 34B1,34B2 MRO Ext ESP at the 34H. (2)

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 8-hour passes with MEX Orbital Science at 34H. MRO Ext ESP 70M, MSPA 7 of 7 passes with M01O Mapping at 70M. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – October (Weeks 40 - 43) (continued)

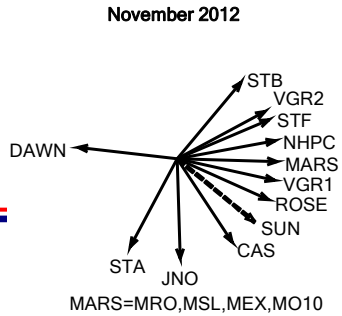
ANALYSES

1. **(70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O, MRO, SOHO, STF, VGR1 and VGR2. Contention is due to oversubscription of the subnet during MSL Mars Approach and Landing and requests for MSL Relay support from other M01O and MRO missions, as well as MRO and M01O. Requested time nearly doubles the 70 meter capacity and leaves no time to support missions with overlapping viewperiods. Reduction or full MSPA of non-MSL relay support by other missions and gaps in MSL continuous coverage are necessary to relieve the contention and allow support for DSS Maintenance and missions like STF. Continuous Mars relay coverage and direct to Earth coverage will require supplementing support from the already oversubscribed 34 meter subnets.**

2. **(34BWG1) The projected unsupportable time is moderate to extreme for ACE, CAS, DSS Maintenance, MRO, SOHO, STF, THEMIS-B, THEMIS-C, VGR2 and WIND. Contention is due to oversubscription of the subnet in the Mars view. The 34 Meter antennas are unable to fully support all requested for MRO, MEX and MSL as well as all other DSN users, particularly at Canberra where assets are limited.**

Contention levels on the 34HEF, 34BWG2, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2012 – November (Weeks 44 - 48)



EVENTS

DSS-26 proposed downtime for AZ Track Replacement ends in week 44

Cassini Tour

Chandra Leonid Pass in weeks 46 and 47

Dawn Ceres Thrust PB and TV; Delta DOR in weeks 44, 46 and 48, Forced Coast in week 47 and 48

EGS Global VLBI in week 46

GSSR Asteroid 2007 PA8 in weeks 44 – 46

INTG Redu Maintenance in weeks 45 and 47

JUNO Periodic Maintenance in week 44, Cruise begins in week 45

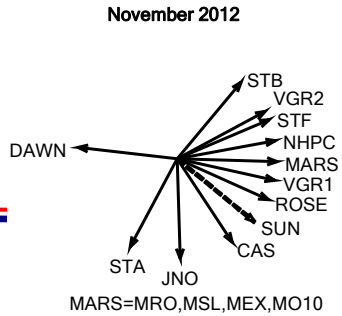
Mars Express Orbital Science; R/S Bi-Static in weeks 44 and 48

Mars Odyssey Mapping and MSL Relay

Mars Reconnaissance Orbiter Extended Science Phase and MSL Relay; X/Ka-Delta DOR in week 48

MSL Surface Ops

Resource Allocation Review
Events, Recommendations and Analyses
2012 – November (Weeks 44 - 48) (continued)



EVENTS

New Horizons Beacon ends in week 45, Check out in weeks 45 and 46, Cruise Telemetry in week 44, Beacon resumes in week 47

SGP Crustal Dynamics H-M5 in week 44 and 48, B-M5 in week 46

THEMIS-B MTI ends in week 44, End of Mission in week 44

THEMIS-C MTI ends in week 44, End of Mission in week 44

Voyager 2 BLF U/L and BLF D/L in week 44, B158 U/L BU and D/L CONF BU in week 45, Sequence B158 U/L and D/L CONF in week 45

Resource Allocation Review
Events, Recommendations and Analyses
2012 – November (Weeks 44 - 48) (continued)

RECOMMENDATIONS

DSS approve proposed DSS-26 downtime for Azimuth Track Replacement ending in week 44

M01O Mapping MSPA 7 of 7 10-hour passes at 70M with 70M MRO Ext ESP and reduce to 8 hours. (1)

MEX Orbital Science at 34H MSPA 3 of 7 8-hour passes with 34B1,34B2 MRO Ext ESP at the 34H. (2)

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 8-hour passes with MEX Orbital Science at 34H. MRO Ext ESP 70M, MSPA 7 of 7 passes with M01O Mapping at 70M. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – November (Weeks 44 - 48) (continued)

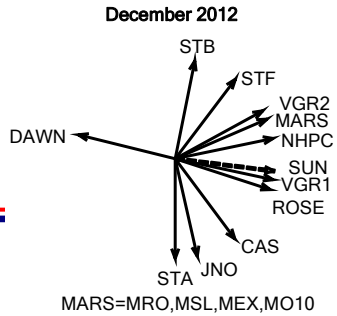
ANALYSES

1. (70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O, MRO, NHPC, STF and VGR2. Contention is due to oversubscription of the subnet during MSL Mars Approach and Landing and requests for MSL Relay support from other M01O and MRO missions, as well as MRO and M01O. Requested time nearly doubles the 70 meter capacity and leaves no time to support missions with overlapping viewperiods. Reduction or full MSPA of non-MSL relay support by other missions and gaps in MSL continuous coverage are necessary to relieve the contention and allow support for DSS Maintenance and missions like STF. Continuous Mars relay coverage and direct to Earth coverage will require supplementing support from the already oversubscribed 34 meter subnets.

2. (34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, MRO, STF, VGR2 and WIND. Contention is due to oversubscription of the subnet in the Mars view. The 34 Meter antennas are unable to fully support all requested for MRO, MEX and MSL as well as all other DSN users, particularly at Canberra where assets are limited.

Contention levels on the 34HEF, 34BWG2, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Events, Recommendations and Analyses
2012 – December (Weeks 49 - 52)



EVENTS

ATOT A01 Image in week 51

Cassini Tour

Dawn Ceres Thrust PB and TV; Delta DOR in weeks 50 and 52

GSSR Asteroid 4179 Tout in weeks 49 and 50

INTG Redu Maintenance in weeks 49 and 51

JUNO Cruise

Mars Express Orbital Science; R/S Bi-Static in week 52

Mars Odyssey Mapping and MSL Relay

Mars Reconnaissance Orbiter Extended Science Phase and MSL Relay

MSL Surface Operations

New Horizons Beacon; Cruise Telemetry in week 49, Solar Conjunction in week 52

SGP Crustal Dynamics B-M5 in weeks 49 and 51, H-M5 in week 50

SOHO Keyhole begins in week 51

Resource Allocation Review
Events, Recommendations and Analyses
2012 – December (Weeks 49 – 52) (continued)

RECOMMENDATIONS

M01O Mapping MSPA 7 of 7 10-hour passes at 70M with 70M MRO Ext ESP and reduce to 8 hours. (1)

MEX Orbital Science at 34H MSPA 3 of 7 8-hour passes with 34B1,34B2 MRO Ext ESP at the 34H. (2)

MRO Ext ESP at 34B1,34B2 MSPA 3 of 7 8-hour passes with MEX Orbital Science at 34H. MRO Ext ESP 70M, MSPA 7 of 7 passes with M01O Mapping at 70M. (1,2)

Resource Allocation Review
Events, Recommendations and Analyses
2012 – December (Weeks 49 - 52) (continued)

ANALYSES

1. **(70M) The projected unsupportable time is moderate to extreme for DSS Maintenance, M01O, MRO, SOHO, STF and VGR2. Contention is due to oversubscription of the subnet during MSL Mars Approach and Landing and requests for MSL Relay support from other M01O and MRO missions, as well as MRO and M01O. Requested time nearly doubles the 70 meter capacity and leaves no time to support missions with overlapping viewperiods. Reduction or full MSPA of non-MSL relay support by other missions and gaps in MSL continuous coverage are necessary to relieve the contention and allow support for DSS Maintenance and missions like STF. Continuous Mars relay coverage and direct to Earth coverage will require supplementing support from the already oversubscribed 34 meter subnets.**

2. **(34BWG1) The projected unsupportable time is moderate to severe for ACE, DSS Maintenance, MRO, SOHO, STF, VGR2 and WIND. Contention is due to oversubscription of the subnet in the Mars view. The 34 Meter antennas are unable to fully support all requested for MRO, MEX and MSL as well as all other DSN users, particularly at Canberra where assets are limited.**

Contention levels on the 34HEF, 34BWG2, 34HSB subnets are workable and should resolve during final schedule preparations and negotiations

Resource Allocation Review
Supplemental Materials

Supplemental materials may be found on the

Resource Allocation Planning Service (RAPS) Homepage at:

http://rapweb.jpl.nasa.gov/

- **Ongoing Users Negotiated Requirements**
  - **Individual User Loading Profiles**
- **Resource Allocation Review Information**
  - **Supplemental Yearly Information**